



1410 North Hilton • Boise, ID 83706 • (208) 373-0502

C. L. "Butch" Otter, Governor Toni Hardesty, Director

August 28, 2007

Mr. Robert Myers Bitterroot Investments LLC 606 Lakeview Blvd. Sandpoint, Idaho 83864

Re: Voluntary Cleanup Program Remediation Agreement, Alpine Lumber, Sandpoint, Idaho.

Dear Mr. Myers:

Attached with this letter is a copy of the final, signed Voluntary Remediation Agreement ("Agreement") that guides your participation in the IDEQ Voluntary Cleanup Program (VCP) for your Alpine Lumber property. This is also to acknowledge receipt of your \$2500.00 deposit for DEQ oversight costs associated with the project.

We look forward to working with you to successfully complete the cleanup of Alpine Lumber. The next milestone to be completed as part of the Agreement is the development of a Voluntary Remediation Workplan. If you have any questions or comments regarding the Workplan or any other questions related to the VCP please feel free to contact me at (208) 373-0246.

Sincerely,

Bruce Wicherski, P.G.

Bruce Wicherski

Voluntary Cleanup Program Manager Waste and Remediation Division

BW:tg valpine lumber signed vra notification letter doe

cc:

Aaron Scheff Steve Gill

# IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY

In the matter of:	)	VOLUNTARY REMEDIATION AGREEMENT
Bitterroot Investments, LLC	)	
do Robert Myers and Lyn	)	Idaho Code § 39-7205
Roberts	)	

## I. INTRODUCTION

1. This Voluntary Remediation Agreement (Agreement) is entered into voluntarily by the Idaho Department of Environmental Quality (Department) and Bitterroot Investments, LLC for the purpose of remediating contamination at and from Sandpoint Wood Treaters (Site). The Department and Bitterroot Investments LLC are collectively referred to as "the Parties." Bitterroot Investments, LLC is voluntarily conducting this cleanup.

## II. AUTHORITY

- 2. The Parties enter this Agreement pursuant to the Idaho Land Remediation Act, Idaho Code §§ 39-7201 through 39-7210, and the Idaho Land Remediation Rules, IDAPA 58.01.18 et seq.
- 3. The Department has determined that the application submitted by Bitterroot Investments, LLC is complete and that Bitterroot Investments, LLC is eligible to participate in the voluntary remediation program established under Idaho Code § 39-7201 et seq.

#### III. PARTIES BOUND

- 4. This Agreement shall apply to and be binding upon Bitterroot Investments, LLC, its successors and assigns, and upon the Department, its successors and assigns. The signatories to this Agreement certify that they are fully authorized to execute and legally bind the Parties they represent.
- 5. Bitterroot Investments, LLC shall provide a copy of this Agreement to any subsequent owners or successors of the Site before Bitterroot Investments, LLC transfers Site ownership. Bitterroot Investments, LLC shall provide a copy of this Agreement to all contractors, sub-contractors, laboratories and consultants Bitterroot Investments, LLC retains to conduct work performed under this Agreement, within fourteen (14) days after the effective date of this Agreement or within fourteen (14) days of the date of retaining their services.

#### IV. **DEFINITIONS**

6. "Site" shall be used in the manner as defined by Idaho Code § 39-7203(8) and shall refer to the property identified in Paragraph 1 of this Agreement.

7. All other terms contained in this Agreement shall be used in the same manner as defined by Idaho Code § 39-7203 and IDAPA 58.01.18.010.

## V. PURPOSE

- 8. This Agreement sets forth the terms and conditions of evaluation and implementation of a Voluntary Remediation Work Plan (Work Plan) to be proposed by Bitterroot Investments, LLC for the remediation of contaminants at or originating on the Site.
- 9. Bitterroot Investments, LLC shall provide all necessary information for a Work Plan for the Site. The activities of the Department and Bitterroot Investments, LLC shall be consistent with this Agreement, all applicable laws and regulations, and any appropriate guidance documents.

# VI. SUBMISSION OF PROPOSED WORK PLAN

10. Within sixty (60) days of the effective date of this Agreement, Bitterroot Investments, LLC shall submit a proposed Work Plan to the Department. The Proposed Work Plan shall contain the elements specified by IDAPA 58.01.18.022.02 and shall be submitted with information supporting the proposed Work Plan as specified by IDAPA 58.01.18.022.03.

# VII. REVIEW AND EVALUATION OF PROPOSED WORK PLAN

- 11. The Department shall review and evaluate the Site, the affected area surrounding the Site and the proposed Work Plan in accordance with Idaho Code § 39-7206(1).
- 12. The Department may, at any time during the evaluation of the proposed Work Plan, request the submission of additional or corrected information and a revision of the proposed Work Plan pursuant to Idaho Code § 39-7206(2). Bitterroot Investments, LLC may either comply with the request or withdraw the proposed Work Plan and terminate this Agreement.

## VIII. PUBLIC REVIEW OF PROPOSED WORK PLAN

Within thirty (30) days of receiving the proposed Work Plan, or a final revised proposed Work Plan should the Department request additional or corrected information pursuant to Paragraph 12 above, the Department shall initiate the public notification and comment requirements of Idaho Code § 39-7206(3). No later than fifteen (15) days after the close of the public comment period, the Department may, in accordance with Idaho Code § 39-7206(4) and IDAPA 58.01.18.022.04.a, schedule a public hearing.

# IX. PROPOSED WORK PLAN APPROVAL, APPROVAL WITH MODIFICATION OR REJECTION

- 14. Within thirty (30) days of the close of the public comment period or the public hearing, whichever is later, the Department shall, based on its review and evaluation and consideration of any written public comments and testimony, notify Bitterroot Investments, LLC, in writing, that the proposed Work Plan is approved, approved with modifications, or rejected. Department notification that the proposed Work Plan is rejected shall specify the reasons for rejection, provide Bitterroot Investments, LLC thirty (30) days to amend and resubmit the proposed Work Plan, and notify Bitterroot Investments, LLC of its rights to appeal the rejection pursuant to Idaho Code § 39-7206.
- 15. Within thirty (30) days of receiving notification that the proposed Work Plan has been approved with modifications, Bitterroot Investments, LLC shall notify the Department, in writing, that the modifications are accepted or rejected. If Bitterroot Investments, LLC accepts the modifications, the proposed Work Plan shall be deemed approved by the Department as modified. If Bitterroot Investments, LLC rejects the modifications, and the Parties are unable to negotiate acceptable modifications, the proposed Work Plan shall be deemed rejected by the Department.
- 16. Upon rejection of the proposed Work Plan by the Department, Bitterroot Investments, LLC may:
  - a. Amend and resubmit the proposed Work Plan;
  - b. Withdraw the proposed Work Plan and terminate this Agreement; or
  - c. Appeal the Department's rejection pursuant to Idaho Code § 39-7206 and the Idaho Administrative Procedure Act, chapter 52, title 67, Idaho Code.

# X. EFFECT OF APPROVED WORK PLAN

17. An approved Work Plan shall be deemed incorporated and is enforceable as part of this Agreement.

#### XI. IMPLEMENTATION OF WORK PLAN

- 18. Bitterroot Investments, LLC shall fully implement the approved Work Plan in accordance with the approved Work Plan, the terms and conditions of this Agreement, the Idaho Land Remediation Rules, and the Idaho Land Remediation Act.
- 19. The Work Plan must achieve health-based and environmental remediation standards according to IDAPA 58.01.18.023.

- 20. Within thirty (30) days of the effective date of this Agreement, the Department shall identify and assist Bitterroot Investments, LLC in the timely issuance of Department permits or approvals required to initiate and complete implementation of the Work Plan.
- 21. Bitterroot Investments, LLC shall submit quarterly progress reports to the Department with respect to actions and activities undertaken pursuant to this Agreement. The progress reports shall, at a minimum:
  - a. Describe the actions which have been taken to comply with this Agreement during the prior quarter;
  - b. Describe all work planned for the next quarter with schedules relating such work to the overall project schedules; and
  - c. Describe all problems encountered and any anticipated problems, any actual or anticipated delays and any solutions developed and implemented to address any actual or anticipated problem or delay.

### XII. WORK PLAN COMPLETION REPORT

- 22. When Bitterroot Investments, LLC believes the objectives of the Work Plan have been achieved and successfully implemented for the Site, Bitterroot Investments, LLC shall submit to the Department a Voluntary Remediation Work Plan Completion Report and request that the Department issue a Certificate of Completion for the Site. The Work Plan Completion Report shall contain information sufficient for the Department to determine whether Bitterroot Investments, LLC achieved the Work Plan objectives.
- 23. The Department shall, within thirty (30) days of the receipt of a Work Plan Completion Report and a request for a Certificate of Completion, notify Bitterroot Investments, LLC, in writing, whether or not the Work Plan has been successfully implemented.
- 24. If the Department notifies Bitterroot Investments, LLC that the Voluntary Remediation Work Plan has not been successfully implemented, Bitterroot Investments, LLC shall implement the Work Plan to the satisfaction of the Department and resubmit the Work Plan Completion Report.

#### XIII. CERTIFICATE OF COMPLETION

25. If the Work Plan Completion Report demonstrates that Bitterroot Investments, LLC has successfully implemented the Work Plan, the Department shall certify such facts by issuing a Certificate of Completion to Bitterroot Investments, LLC. Bitterroot Investments, LLC shall record the Certificate of Completion with the deed for the Site on which the remediation took place. The Department may condition the Certificate of Completion upon continued monitoring, recordation or maintenance of institutional or engineering controls, or other continuing actions by Bitterroot Investments, LLC under the Work Plan.

#### XIV. COVENANT NOT TO SUE

- 26. Bitterroot Investments, LLC may, within thirty (30) days of receiving the Certificate of Completion from the Department, request the negotiation and provision of a Covenant Not to Sue for the Site, as provided by Idaho Code § 397207. Negotiation and provision of the Covenant Not to Sue shall occur within thirty (30) days of Bitterroot Investments, LLC's request unless extended upon written notice and reasonable cause by either Party. Such Covenant Not to Sue shall extend to any current or future owner or operator of the Site who did not cause, aggravate, or contribute to the release or threatened release.
- 27. In addition to any Covenant Not to Sue provided pursuant to paragraph 26 above, the Department shall, upon request by Bitterroot Investments, LLC, discuss and as appropriate provide covenants not to sue, prospective purchaser agreements or other written assurances to third parties desiring to purchase or lease the Site or portions of the Site or to third parties owning or desiring to purchase or lease off-Site property where contamination addressed by the Work Plan may have migrated.
- 28. The Department shall, upon request by Bitterroot Investments, LLC, provide appropriate written assurances to lenders and other third parties protected under Idaho Code § 39-7209 and IDAPA 58.01.18.026.
- 29. Any Covenant Not to Sue shall not apply to claims for a condition or the extent of a condition that:
  - a. Was present on the site involved in an approved and implemented voluntary remediation work plan; and
  - b. Was not known to the Department at the time the Department issued the Certificate of Completion.

#### XV. RESCISSION

- 30. The Department may rescind the Agreement or the Covenant Not to Sue at any time, in accordance with Idaho Code § 39-7208 and IDAPA 58.01.18.025.02, if:
  - a. The person implementing the Work Plan fails substantially to comply with the terms and conditions of:
    - i. the Agreement; or
    - ii. the Covenant Not to Sue
  - b. The Department determines, due to a change in known conditions, the petroleum release that is the subject of this Agreement and Remediation Work Plan presents an imminent and substantial threat to human health and environment. The

Department agrees to meet with the Agency before rescinding the Agreement or Covenant Not to Sue under this provision to discuss the basis of the Department's determination and whether the Department's concerns may be addressed absent termination of the Agreement or Covenant Not to Sue.

# XVI. MODIFICATION OF AGREEMENT OR WORK PLAN

- 31. No modification of this Agreement or the Work Plan shall be effective except upon mutual agreement of the Parties and in writing. Modification of the Work Plan may be subject to public notice and comment in accordance with IDAPA 58.01.18.022.05.
- 32. The Parties recognize that modification of this Agreement or the Work Plan may be necessary at some point in the future. In such event, the Party that determines that additional work or other modification of the Agreement or Work Plan is necessary shall provide written notice of such determination to the other Party. The other Party shall respond to such notice in writing within ten (10) days of receipt or such other time as may be agreed to by the Parties. If the Parties agree on the modification to the Agreement or Work Plan, the modification shall be in writing and the Agreement or Work Plan shall be deemed amended subject to public notice and comment in accordance with IDAPA 58.01.18.022.05. XVII. SAMPLING AND DATA/DOCUMENT AVAILABILITY
- 33. Bitterroot Investments, LLC shall, upon request, make the results of all sampling, including raw data, and/or tests or other data generated by Bitterroot Investments, LLC or on Bitterroot Investments, LLC's behalf regarding the Site, available to the Department. The Department shall, upon request, make available to Bitterroot Investments, LLC the results of sampling and/or tests or other data similarly generated by the Department.

#### XVIII. ACCESS

- 34. Bitterroot Investments, LLC shall provide authorized representatives of the Department access to the Site and other areas where work is to be performed at all reasonable times. Such access shall be related solely to the work being performed on the Site and shall include, but not be limited to: inspecting records, operating logs and contracts related to the Site; reviewing the progress of Bitterroot Investments, LLC in carrying out the terms of this Agreement; conducting such tests, inspections and sampling as the Department may deem necessary; using a camera, sound recording or other documentary type equipment for field activities; and verifying the data submitted to the Department by Bitterroot Investments, LLC hereunder. Bitterroot Investments, LLC shall permit the Department's authorized representatives to inspect and copy all records, files, photographs, non-privileged documents and other writings, including all sampling and monitoring data, which reasonably pertain to this Agreement and over which Bitterroot Investments, LLC exercises control. All persons with access to the Site pursuant to this Agreement shall comply with approved health and safety plans.
- 35. Nothing herein shall be construed as restricting the inspection or access authority of the Department under any law or regulation.

#### XIX. OVERSIGHT COSTS

- 36. Bitterroot Investments, LLC shall pay reasonable oversight costs incurred by the Department in connection with Bitterroot Investments, LLC's application and participation in the voluntary remediation program.
- 37. The Department shall provide a quarterly accounting to Bitterroot Investments, LLC of actual oversight costs incurred by the Department.
- 38. Costs incurred by the Department for oversight of voluntary remediation actions will be reimbursed in the following manner:
  - a. Bitterroot Investments, LLC shall deposit two thousand five hundred dollars (\$2,500) with the Department.
  - b. The Department estimates the oversight of voluntary remediation actions at Bitterroot Investments, LLC with a rate of fifty dollars (\$50.00) per hour. Should funding be required for costs incurred in excess of the initial two thousand five hundred dollars (\$2,500) deposit, the Department will notify Bitterroot Investments, LLC of required successive deposits in the amount of two thousand five hundred dollars (\$2,500).
  - c. The unused portion of the deposit(s) will be returned to Bitterroot Investments, LLC within sixty (60) days of the date the Department issues a Certificate of Completion.
  - d. The Department's oversight costs shall include the Department's costs incurred after approval of Bitterroot Investments, LLC's application, including, but not limited to, the review, processing, and negotiation of the Agreement; the review, processing, and approval of the Work Plan; dissemination of public notices and any public hearings; oversight of work performed in accordance with the Work Plan; issuance of any Certificates of Completion; issuance of any Covenants Not to Sue; issuance of any other assurances to Third parties; and administrative expenses associated with cost recovery activities or any other costs incurred pursuant to IDAPA 58.01.18.021.04.
  - e. Oversight deposits to be submitted to the Department should be sent to:

Fiscal Office Idaho Department of Environmental Quality 1410 N. Hilton Boise, ID 83706

# XX. DESIGNATED PROJECT COORDINATOR/NOTICE

- 39. On or before the effective date of this Agreement, each Party shall designate its own Project Coordinator. Each Project Coordinator shall be responsible for overseeing the implementation of this Agreement. To the maximum extent possible, communications between Bitterroot Investments, LLC and the Department shall be directed to the Project Coordinator by mail, with copies to such other persons as the Department and Bitterroot Investments, LLC may respectively designate. Communications shall include, but are not limited to, all documents, reports, approvals, disapprovals, and other correspondence submitted under this Agreement. All such documents shall be sent to the following addressees, or to any other addressees which Bitterroot Investments, LLC and the Department designate in writing:
  - a. Documents to be submitted to the Department should be sent to:

Bruce Wicherski, Voluntary Cleanup Program Manager Idaho Department of Environmental Quality 1410 N. Hilton Boise, ID 83706

b. Documents to be submitted to Bitterroot Investments, LLC should be sent to:

Robert Myers Alpine Lumber Supply 120 E Lake St suite 309 Sandpoint Idaho 83864

## XXI. DISPUTE RESOLUTION

40. If Bitterroot Investments, LLC objects to any Department notice or disapproval, addendum oversight, accounting or decision made pursuant to this Agreement, Bitterroot Investments, LLC may notify the Department's Project Coordinator, in writing, of its objections within fourteen (14) days after receipt of the decision. The Department and Bitterroot Investments, LLC then have an additional fourteen (14) days to reach agreement. If no agreement is reached after fourteen (14) days (or such other period of time to which all Parties mutually agree) the Department shall notify Bitterroot Investments, LLC in writing of the Department's decision on the matter. Bitterroot Investments, LLC may request a determination by the Director of the Department. The Director's determination is the Department's final decision on the matter. Nothing in this Section precludes the Parties from agreeing to use other forms of alternative dispute resolution.

## XXII. RESERVATION OF RIGHTS

- 41. The Department and Bitterroot Investments, LLC reserve all rights and defenses they may have pursuant to any available legal authority unless expressly waived herein.
- 42. Nothing herein is intended to release, discharge, or in any way affect any claims, causes of action or demands in law or equity which the Parties may have against any person, firm, partnership or corporation, not a Party to this Agreement, for any liability it may have arising out of, or relating in any way to, the generation, storage, treatment, handling, transportation, release or disposal of any materials, hazardous substances, hazardous waste, petroleum contaminants, or pollutants at, to or from the Site. The Parties to this Agreement expressly reserve all rights, claims, demands and causes of action they have against any and all other persons and entities who are not Parties to this Agreement, and as to each other for matters not covered hereby.
- 43. Bitterroot Investments, LLC reserves the right to seek contribution, indemnity, or any other available remedy against any person, other than the Department, found to be responsible or liable for contributions, indemnity, or otherwise for any amounts which have been or will be expended by Bitterroot Investments, LLC in connection with this Site.
- During implementation of the Work Plan, in accordance with this Agreement the Department shall not, as provided by Idaho Code § 39-7207(7) bring an action, including an administrative action, against Bitterroot Investments, LLC for any liability for remediation relating to the release or threatened release of any hazardous substance or petroleum that is the subject of the Work Plan.

## XXIII. QUALITY ASSURANCE

45. Bitterroot Investments, LLC shall provide the Department Project Coordinator with reasonable advance notice of all sampling and analysis as detailed in the Work Plan.

#### XXIV. FORCE MAJEURE

- 46. Bitterroot Investments, LLC shall cause all work or required reporting to be performed within the time limits set forth herein, unless performance is delayed by events which constitute a force majeure. For purposes of this Agreement, a force majeure is an event the Parties agree arises from circumstances beyond the reasonable control of Bitterroot Investments, LLC which delays performance of any obligations required by this Agreement. Increases of costs shall not be considered an event of force majeure.
- 47. Bitterroot Investments, LLC shall notify the Department by calling within three (3) calendar days and by writing no later than seven (7) calendar days after any event which Bitterroot Investments, LLC contends is a force majeure. Such notification shall describe the anticipated length of the delay, the cause or causes of the delay, the measures taken or to be taken by Bitterroot Investments, LLC to minimize the delay, and the timetable by

which these measures will be implemented. Bitterroot Investments, LLC shall have the burden of demonstrating that the event is a force majeure. The decision of whether an event is a force majeure shall be made by the Department. The Department shall notify Bitterroot Investments, LLC by calling of its decision within two (2) calendar days after receiving notice.

48. If a delay is attributable to a force majeure, the time period for performance under this Agreement shall be extended, in writing, by the amount of time that is attributable to the event constituting the force majeure.

## XXV. COMPLIANCE WITH APPLICABLE LAWS

49. All work undertaken by Bitterroot Investments, LLC pursuant to this Agreement shall be performed in compliance with all applicable federal, state and local laws, ordinances and regulations.

#### XXVI. ENFORCEABILITY

50. This Agreement constitutes an enforceable contract between the Parties subject to the Department's right to rescind this Agreement as provided by Idaho Code § 39-7208 and IDAPA 58.01.18.025.02 and Bitterroot Investments, LLC's right to terminate this Agreement as provided by Idaho Code § 39-7206(2)(b) and IDAPA 58.01.18.021.06.

# XXVII. EFFECTIVE DATE

51.	The effective date of this Agreement shall be the date on which this Agreement is signed by the Director of the Department.
DATE	ED this $\frac{13^{\frac{1}{1}}}{1}$ day of $\frac{4 + 4 + 4}{1}$ , 2007.
Ву:	Toni Hardesty, Director

DATED this /3 day of July, 2007.

Idaho Department of Environmental Quality

BITTERROOT INVESTMENTS, LLC

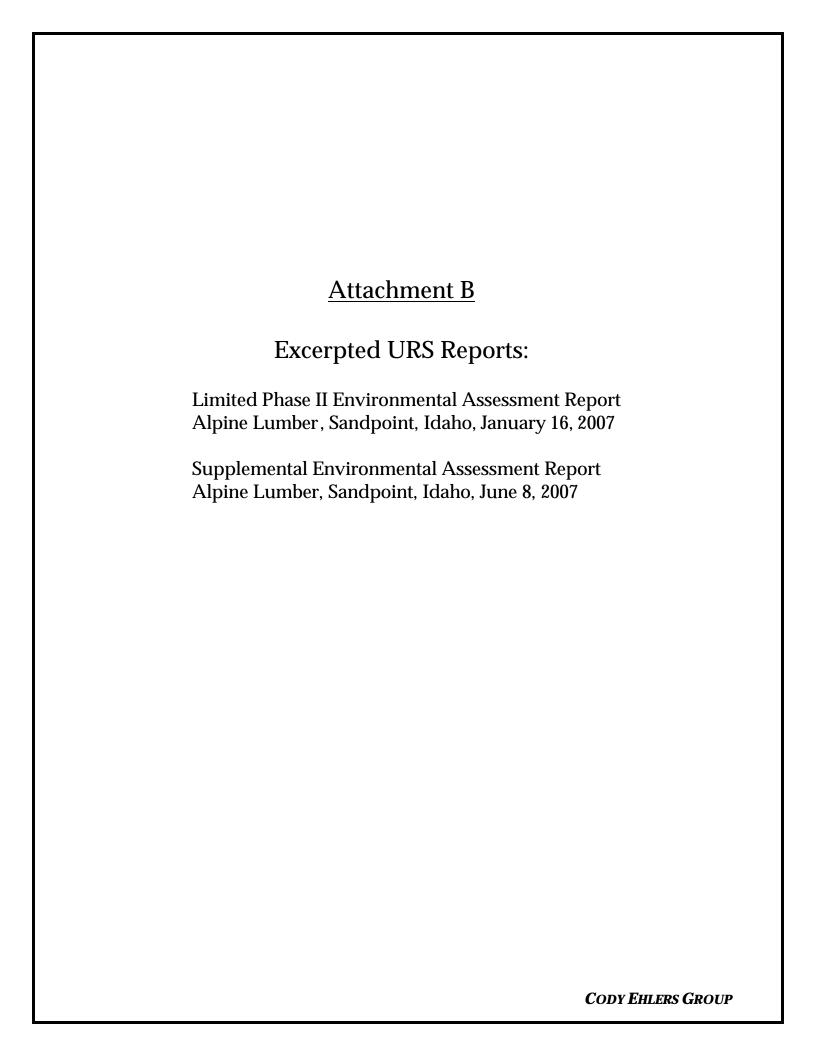
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Robert Myers, Member

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Lyn Roberts, Member

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LIMITED PHASE II ENVIRONMENTAL ASSESSMENT REPORT ALPINE LUMBER SANDPOINT, IDAHO

Prepared For: IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY URS PROJECT NO. 36298198

URS CORPORATION 920 North Argonne Road, Suite 300 Spokane, Washington 99212 509.928.4413

January 16, 2007



January 16, 2007

Mr. Steve Gill Brownfields Program Specialist Idaho Department of Environmental Quality 2110 Ironwood Parkway Coeur d'Alene, Idaho 83814

Re: Letter Report

Limited Phase II Environmental Assessment

Alpine Lumber Sandpoint, Idaho

URS Project No. 36298198

Dear Mr. Gill:

URS Corporation (URS) is pleased to present this letter report for a Limited Phase II Environmental Site Assessment (Phase II ESA) conducted at the Alpine Lumber Facility (site), Sandpoint, Idaho. The location of the site is shown in Figure 1 Vicinity Map. The Phase II ESA was completed in general accordance with URS' proposal No. 0665 to Idaho Department of Environmental Quality (IDEQ), dated October 10, 2006. Work was completed at the request of the Idaho Department of Environmental Quality (IDEQ) under Task 4 of the Technical Assistance for the Waste Management and Remediation Program Contract C432. This letter report presents our field work and findings.

## INTRODUCTION AND BACKGROUND

The site is located at the former location of the Division Street Wood Treating facility. The Division Street Wood Treating facility is the western-most of three adjoining facilities described in the US Environmental Protection Agency's (EPA) Site Inspection Report for the North Sandpoint Wood Treating Facilities, Sandpoint, Idaho, prepared by URS Corporation dated May 24, 1996.

Historic operations at the site included wood treatment operations using creosote wood preservative chemicals from about 1917 until the early 1950s. Wood treatment operations likely included placing poles and other wood products in open, unlined pits of creosote. Treated poles and wood products were subsequently stored at the site to dry. Later uses of the facility included treated pole storage, and more recently lumber storage and sales. The current owner of the site reportedly explored subsurface conditions at the site during the 1990s. Contaminated soil was suspected at the site based on this exploration. The Phase II ESA was conducted to identify vertical and horizontal extent of wood treatment chemical contamination in soil and groundwater at the site.

URS Corporation 920 North Argonne Road, Suite 300 Spokane, WA 99212-2722 Tel: 509.928.4413 Fax: 509.928.4415



Mr. Steve Gill Idaho Department of Environmental Quality January 16, 2007 Page 2 of 9

The current owner of the site is seeking a "no further action" designation for the site either through remedial action and/or institutional controls for the purpose of supporting expansion and redevelopment of the facility. Results of this investigation will be used by IDEQ to conduct an evaluation of environmental risk at the site.

#### SCOPE OF SERVICES

The following describes URS' scope of services performed for the Phase II ESA:

- Prepared a sampling and analysis plan (SAP) and quality assurance project plan (QAPP) in accordance with EPA guidelines and specifications for preparing a QAPP for environmental studies.
- Prepared a health and safety plan (HASP) in accordance with CFR 1910.120.
- Contacted the one-call public utility notification organization and contracted with private
  utility locating service to locate utilities in the vicinity of drilling locations.
- Contracted with Environmental West Exploration, a licensed drilling firm, to drill 15 directpush soil borings and two hollow-stem-auger (HSA) borings across portions of the site.
- Described soil conditions using the Unified Soil Classification System (USCS).
- Retained two soil samples from each direct-push and HSA soil boring for possible laboratory analysis.
- Collected groundwater samples from each direct-push soil boring using new polyethylene tubing and a peristaltic pump.
- Installed two 2-inch polyvinyl chloride (PVC) monitoring well into each HSA soil boring.
- Developed each new well by sparging and purging at least five well volumes from each well.
   Wells were sparged and purged until groundwater removed from the wells had minimal turbidity or until no visual improvement in water clarity was observed following each consecutive sparge and purge event.
- Collected groundwater samples from each of the new wells and one existing well. Each well
  was purged using low-flow sampling techniques using a peristaltic pump. Measured depth to
  groundwater in each well before purging using a decontaminated water level indicator.
- Surveyed the elevation of each new well and one existing well with a construction level
  using a site specific datum. A hand held Global Positioning System (GPS) device was used
  to record each monitoring well and geoprobe soil boring location.
- Submitted 22 soil samples and 16 groundwater samples under chain-of-custody to Test
  America Laboratories of Spokane, Washington for laboratory analysis of polynuclear
  aromatic hydrocarbons (PAHs) and pentachlorophenol (PCP) by EPA Method 8270 SIM and
  volatile organic compounds (VOCs) by EPA Method 8260B. Seven select soil and
  groundwater samples were also analyzed for polychlorinated dibenzodioxins and
  polychlorinated dibenzofurans (PCDD/Fs) by EPA Method EPA 8290.





- Placed soil cuttings, development water, purge water and decontamination liquids into labeled drums and stored them at a location approved by IDEQ to be held until results from the laboratory are received and an appropriate disposal location is identified.
- Prepared a Phase II ESA summary report describing field activities and methodology, sample locations, sample results, and a summary of findings.

## FIELD ACTIVITIES

Field activities were conducted on October 23 through 27, 2006 and November 27, 2006. Environmental West Exploration, as a subcontractor to URS, advanced 15 direct-push soil borings and two HSA borings, installed two 2-inch PVC flush mount groundwater monitoring wells, and developed each well. A URS scientist observed drilling, well installation, and development activities and collected soil and groundwater samples. Field activities were conducted in accordance with the approved SAP and QAPP.

Fifteen direct-push soil borings labeled BH-1 through BH-15 were completed on October 23 through 25, 2006. Total depths of direct-push soil borings ranged from 16 to 20 feet below ground surface (bgs). Continuous soil samples in 4-foot-increments were collected during drilling and described by a URS geologist using the Unified Soil Classification System (USCS). Boring logs are presented in Appendix A. Two grab samples were collected from each boring for potential laboratory analysis where contamination was most likely based on field observations including photoionization detector headspace, sheen testing, odor, and/or visual indicators. If no indicators of contamination were observed, sample depths were chosen based on field observation in adjacent borings. Non-disposable and non-dedicated drilling equipment was decontaminated with high pressure water before drilling each soil boring.

Groundwater samples were collected from each boring by placing a temporary four-foot screen at the bottom of each direct-push soil boring. Groundwater samples were collected using new polyethylene tubing and a peristaltic pump. Up to 5 gallons of groundwater were purged from each borehole before sampling. Water quality parameter measurements were not obtained during borehole purging or collection of groundwater samples from direct-push soil borings.

Two HSA soil borings labeled BH-16 and BH-17 were completed on October 26, 2006. Soil samples were collected at approximately 5-foot-intervals during drilling using decontaminated standard penetration resistance (SPT) split-spoon samplers. Soil conditions were described using the USCS. Soil boring borelogs are presented in Appendix A. Two soil samples were retained for possible laboratory analysis using field observations as described above. A 2-inch PVC monitoring well was installed in each HSA boring. Boreholes BH-16 and BH-17 became monitoring wells MW-2 and MW-3, respectively. Well construction details are located in Appendix B. Each well was developed by sparging and purging at least five well volumes from each well. Wells were sparged and purged until groundwater removed from the wells had minimal turbidity or until no visual improvement in water clarity was observed following each consecutive sparge and purge event. See Appendix C for well development records.



Mr. Steve Gill Idaho Department of Environmental Quality January 16, 2007 Page 4 of 9

On October 27, 2006 the two new wells and one existing off site well (well MW-1WS) were sampled using low flow sampling techniques with a peristaltic pump and dedicated polyethylene tubing. Depth-to-water measurements were obtained before sampling using a decontaminated water level indicator. Sampling procedures generally complied with the approved SAP and QAPP. Appendix D contains a record of water quality parameter measurements obtained during sampling. Soil and groundwater samples were delivered on October 28, 2006 to Test America Laboratories in Spokane, Washington under chain-of-custody.

The location of each boring and well, including the off site well was recorded with a handheld GPS Device using the World Geodetic System of 1984 (WGS 84). The coordinates are presented in Sample Summary, Table 1.

On November 27, 2006 relative well elevations were measured with a construction level. Elevations were measured from the top of the well casing to an arbitrary datum of 100 feet. In addition, a second round of depth-to-water measurements were obtained from the two on site and one off site wells. Relative well elevations are presented in Appendix B, Well Construction Detail. Figures 3 and 4 present relative groundwater elevations and approximate groundwater flow direction for October and November 2006, respectively.

Investigation derived waste is stored on site pending receipt of analytical results and disposal profiling.

#### SITE CONDITIONS

# Soil Conditions

In general, northern Idaho comprises two main geologic elements: the older consolidated formations, which comprise the bedrock that crops out in the mountains and underlies the valleys at depth, and the unconsolidated materials of the Pleistocene and Holocene epochs, which occur as valley fill. The granite bedrock of Bonner County is highly metamorphose and exhibits considerable faulting. The valley fill in northern Idaho consists of three kinds of material: sand and gravel deposited by streams; clay, silt and fine grained sand lay down in lakes; and glacial till deposited directly by ice. (URS 1996)

Sandpoint is located in the Purcell Trench, which is bordered by the Selkirk Mountains to the west and the Cabinet Mountains to the east. The Sandpoint Lowland is a broad part of the Purcell Trench north of Lake Pend Oreille. This lowland is generally underlain by lake bed deposits of clay, silt, and fine-grained sand. Lake bed deposits normally are composed of alternating layers of silty sand and silty clay, each a few inches to a few feet thick. These deposits can extend to depths of more than 200 feet bgs.

Site soils encountered during this investigation were predominately silty clays. A fill material comprised of silts, sands and gravels was found between one to four feet across the site. Just below the fill layer a layer of silt was found followed by silty clays and clays. Occasional sand lenses ranging from two to twelve inches were found in the clay layers. Soil with concentrations



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of contaminants exceeding the IDTL was identified at 10 of the 16 borehole locations. Generally, soils with concentrations of contaminants exceeding the IDTL's were present in the eastern portion of the site. Depth of impact, based on field screening indicators and analytical results of select samples, range from approximately 3 feet bgs to approximately 18 feet bgs.

## **Surface Water Conditions**

Sand Creek is the nearest surface water body to the site located approximately 4,000 feet to the east. Sand Creek flows into Chuck Slough, which flows into the Pend Oreille River downstream of the outlet of Pend Oreille Lake. The flow of Sand Creek is not measured but is estimated to be 500 cfs (USGS 1994). The Pend Oreille River is controlled by Albeni Falls Dam and has an average flow of 16,550 cfs.

A storm water ditch is located directly north of the site. The ditch is approximately 3 to 5 feet wide and 3 to 5 feet deep. On November 27, 2006 the ditch was approximately half full of water for the entire length of the site. The ditch has vegetation typical of wet soil conditions.

# **Groundwater Conditions**

The water-bearing formations in the Sandpoint valley are the shallow sand and gravel lenses contained within the valley's lake bed deposits. Domestic wells constructed in these deposits usually have shallow depths and generally low yields, except where gravel is encountered. Groundwater is usually encountered at depths of less than 60 feet bgs or less in areas where there is perched groundwater (URS 1996). The shallow groundwater in the vicinity of the site has been noted to occur at depths of 1 to 4 feet bgs and to flow in the southwest direction at an estimated gradient of 22 feet per mile (URS 1996).

Groundwater was found from approximately 7 to 9 feet bgs during the October 27, 2006 sampling event. On November 27, 2006 groundwater was found from approximately 2 to 4 feet bgs. Groundwater flow direction in October was south-southeast. In November 2006 the flow direction was east-northeast. The change in both depth and direction is attributed to increased precipitation during November 2006; the November 2006 measured groundwater direction might reflect a short term flow direction shift. Elevated contaminant levels were found in MW 2 which is down gradient, according to the October 2006 gradient, from borings that were found to have the highest contaminant levels.

## ANALYTICAL RESULTS

Soil and groundwater samples were delivered to TestAmerica Laboratories. Soil and/or groundwater analysis was conducted on samples from each borehole with the exception of BH-1. TestAmerica Laboratories and subcontracted laboratories analyzed selected samples. Subcontracted laboratories included Anatek Labs, in Spokane, Washington, and Maxxam Analytics in Burlington, Ontario, Canada. Soil and groundwater samples were analyzed for VOCs by EPA Method 8260B, PAHs and PCP by EPA Method 8270 Mod, and PCCD/Fs by EPA Method 8290. EPA Method 8270 with high volume injection (8270C-HVI) was used to achieve the necessary detection limits for PAHs in groundwater. Analytical results are presented

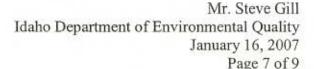


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in Tables 2 through 7 and laboratory data is located in Appendix F. The results were compared to the Initial Default Target Levels (IDTL) described in the Idaho Risk Evaluation Manual dated July 2004. Table 1 presents a summary of soil and water samples that exceeded the ITDL.

Laboratory reports included data quality assurance and quality control (QA/QC) summaries provided by the laboratory. These QA/QC summaries in conjunction with data acceptance criteria outlined in USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA, 1999) and Region 1 EPA, New England Data Validation Functional Guidelines for Evaluating Environmental Analyses (EPA 1996) were reviewed to assess the usability of the data. The following summarizes findings of this review:

- Reporting limits were raised for a number of samples analyzed by each method due to high matrix and analyte concentrations that necessitated dilutions by the laboratory. This data is usable as reported.
- Dilutions described above prevented accurate surrogate recoveries during analysis by EPA Method 8270 Mod and 8270-HVI in the following samples: ALFBH9-10', ALFBH10-14', ALFBH11-9', ALFBH 12-12', ALFBH15-3'. These samples were diluted greater than five times therefore surrogate recovery outside the control limits does not indicate a data quality issue. The data for these samples are usable as reported.
- Surrogate Recoveries for samples ALFBH8@15' and ALFBH10@20' during analysis by EPA Method 8260B were outside the control limits. Analyte concentrations for these samples should be considered estimated values and used for qualitative purposes only.
- The matrix spike duplicate (MSD) recovery in a QA/QC groundwater sample during analysis by EPA Method 8260B for one analyte was outside of the lower control limit by 1.1%. The surrogate recovery in the matrix spike (MS) sample was within the control limits. This does not indicate a significant matrix effect and does not affect the usability of the data associated with this QA/QC sample.
- The relative percent difference (RPD) between the MS and MSD samples for three analytes in a QA/QC soil sample for Method 8260B analysis exceeded the control limit. The MSD sample from this QA/QC batch also had one analyte recovery outside the upper control limit by 1%. These excursions indicate that a matrix effect is potentially present. Two other QA/QC samples were also analyzed and all QA/QC parameters were within the control limits. This appears to be a minor anomaly and the results are usable as reported.
- During analysis of water samples by Method 8270M-SIM benzo(a)anthracene and naphthalene were detected in the method blank. Benzo(a)anthracene was detected at 0.0102 ug/L and naphthalene was detected at 0.627 ug/L. Reanalysis of samples could not be performed due to lack of remaining matrix. The data presented in Table 5 are usable following the guidelines detailed below:





- Samples with concentrations of the affected analytes below the reporting limit remained non-detect;
- Samples with concentrations of the affected analytes above the reporting limit but below five times the concentration of the affected analytes in the method blank were reported as non-detect but the reporting limit (as shown in Table 5) was raised to the concentration found in the sample;
- Samples with concentrations greater than five times the concentration found in the method blank remained the same value.

One sample, ALFBH7GW01, had enough matrix for reanalysis. Reanalysis of this sample was conducted past the laboratory hold time and therefore is unusable.

 Due to laboratory error, samples ALFBH14@10' and ALFBH15@3' were analyzed by Method 8260B past the method-specific holding time and therefore are unusable. However, we included the results for comparison purposes.

Refer to Appendix E for complete laboratory QA/QC documentation.

## SUMMARY AND CONCLUSIONS

In October 2006, URS observed the drilling of 17 soil borings and the installation of two groundwater monitoring wells at the Alpine Lumber site in Sandpoint, Idaho. Soil samples were collected from 16 soil borings and groundwater samples were collected from 14 soil borings/monitoring wells. Select soil and groundwater samples were analyzed for VOCs by EPA method 8260 and PAHs by EPA method 8270mod. In addition, a portion of the samples were analyzed for dioxins and furans by EPA method 8290.

Soil samples from ten boreholes contained one or more contaminants at concentrations exceeding Initial Default Target Levels (IDTL) described in the Idaho Risk Evaluation Manual dated July 2004. Contaminated soil, based on field indicators and select soil sample analysis, ranged from 3 feet to 18 feet in depth. Generally, impacts to soil were present in the eastern portion of the site. One soil sample collected from BH-7, located in the northeast corner of the site, contained pentachlorophenol at concentrations exceeding the IDTL. BH-7 was drilled approximately 6 to 10 feet from current and historic treated power poles.

Groundwater samples from ten soil borings/monitoring wells contained one or more contaminants at concentrations exceeding the IDTL. Generally, groundwater impacts were present in the eastern portion of the site. One off site monitoring well located southeast of the site and sampled as part of this study did not contain concentrations of contaminants exceeding IDTLs. Depth to groundwater in monitoring wells raised from 7 to 9 feet bgs in October 2006 to 1 to 4 feet bgs in November 2006; groundwater flow direction varied from south-southeast to east-northeast respectively.





## LIMITATIONS

The findings and conclusions documented in this report have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area and in general accordance with the terms and conditions set forth in our Agreement, and with the URS proposal dated October 10, 2006. No other warranty, expressed or implied, is made.

The findings presented in this report are based on conditions observed at specific site locations and sampling intervals at the time of the assessment. Because conditions between the boreholes and sampling intervals may vary over distance and time, the potential always remains for the presence of unknown, unidentified, unforeseen or changed surface and subsurface contamination. Conclusions in this report are based on comparison of chemical analytical results to current regulatory standards.

This report is for the exclusive use of IDEQ and their representatives. No third party shall have the right to rely on our opinions rendered in connection with the services or in this document without our written consent and the third party's agreement to be bound to the same conditions and limitations as IDEQ.

URS appreciates the opportunity to provide these services. Please contact the undersigned regarding any questions related to the information provided in this letter report.

Sincerely,

URS CORPORATION

Mike Hermanson

**Environmental Scientist** 

R. David Enos

Branch Office Manager

# **FIGURES**

Figure 1 - Vicinity Map

Figure 2 - Site Map

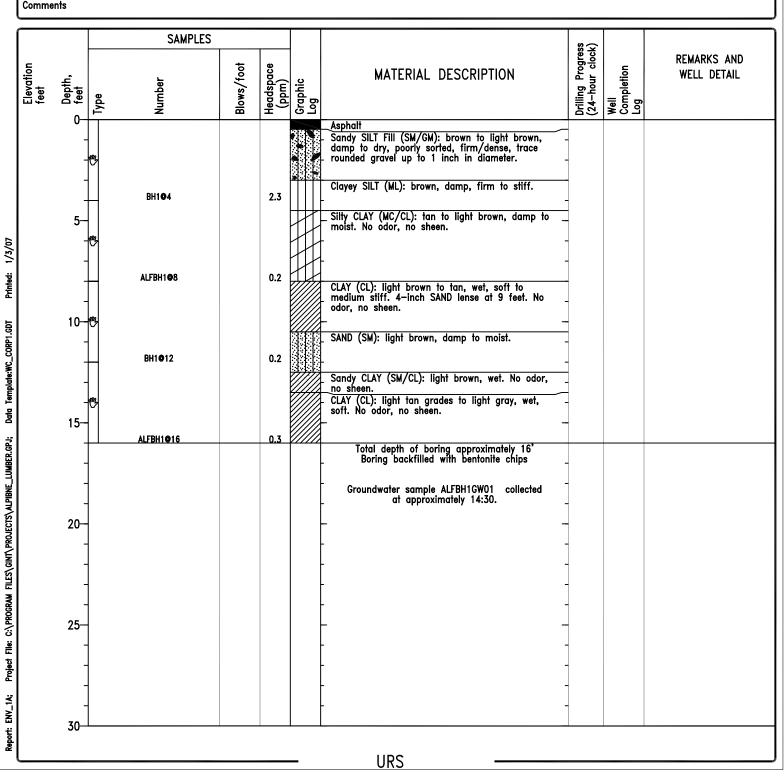
Figure 3 - October 2006 Groundwater Elevations

Figure 4 - November 2006 Groundwater Elevations

Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-1

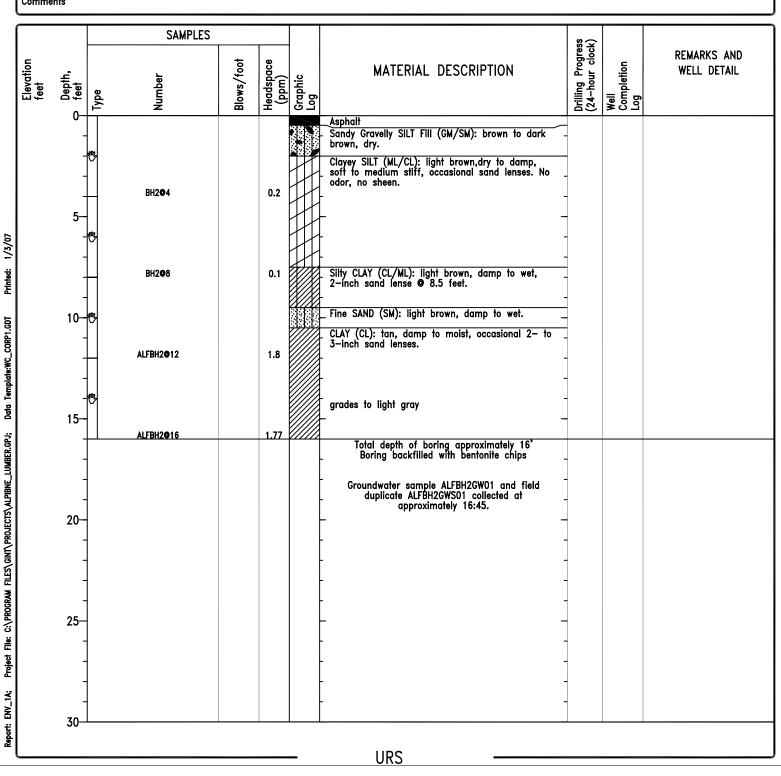
Date(s) Drilled	10/23/06	10/23/06				Checked By	RDE
Drilling Method	Direct Push			Drill Bit Size/Type	2" Direct Push	Total Depth Drilled (feet)	16.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (Ibs/in.)	Pnuematic Hammer
Groundwater Level (feet)	4.8	4.8			10/23/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing		Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A		
Comments							



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-2

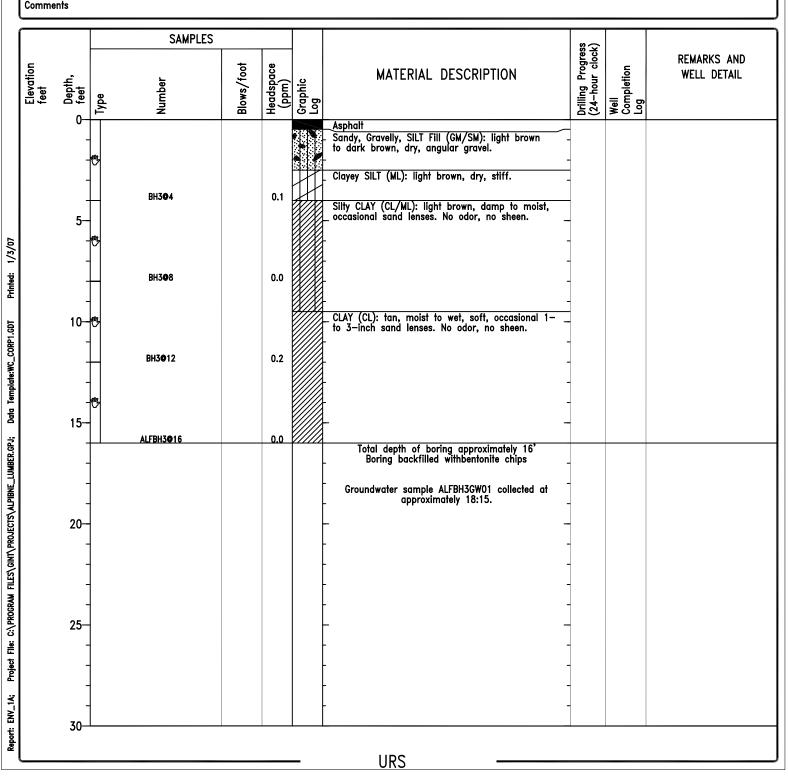
Date(s) Drilled	10/23/06	10/23/06				Checked By	RDE
Drilling Method	Direct Push			Drill Bit Size/Type	2" Direct Push	Total Depth Drilled (feet)	16.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (Ibs/in.)	Pnuematic Hammer
Groundwater Level (feet)	5.2	5.2			10/23/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing		Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A		
Comments							



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-3

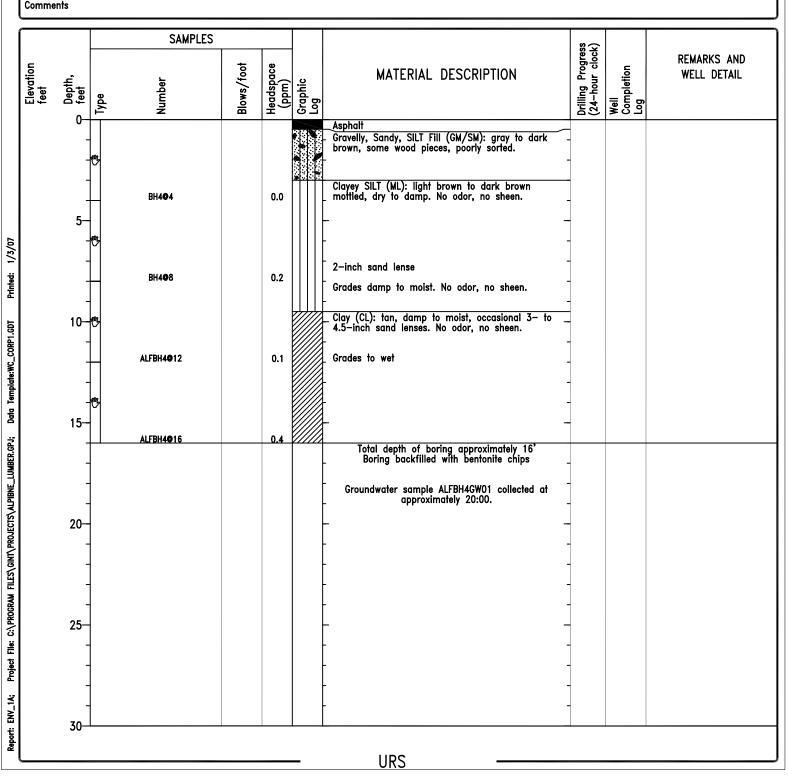
Date(s) Drilled	10/23/06	10/23/06			KAK	Checked By	RDE
Drilling Method	Direct Push			Drill Bit Size/Type	2" Direct Push	Total Depth Drilled (feet)	16.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	4.9	4.9			10/23/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A	Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thicknoor of Seal(s)	ess N/A		
Comments				•			



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-4

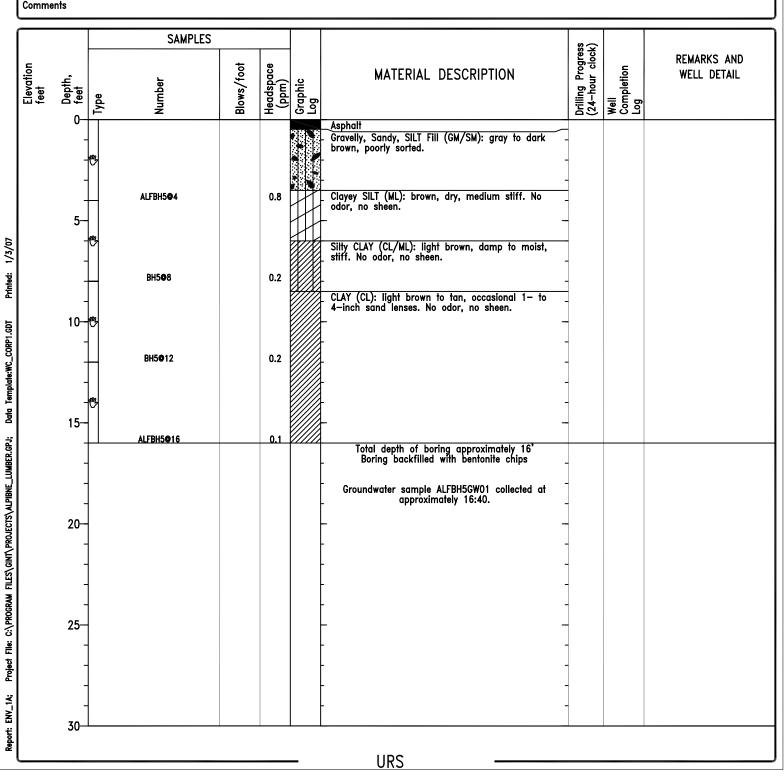
Date(s) Drilled	10/23/06	10/23/06			KAK	Checked By	RDE
Drilling Method	Direct Push	Direct Push			2" Direct Push	Total Depth Drilled (feet)	16.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	7.0	7.0			10/23/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A	Screen Perforation	N/A
Type of Sand Pack	N/A	· ·		Type/Thickne of Seal(s)	ess N/A	•	
Comments							



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-5

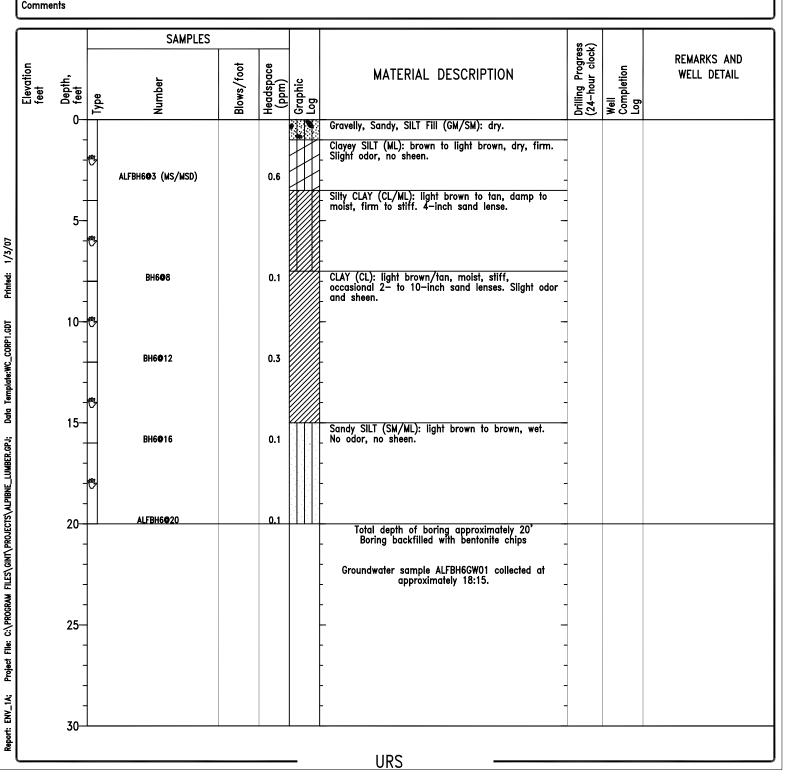
Date(s) Drilled	10/24/06	10/24/06				Checked By	RDE
Drilling Method	Direct Push			Drill Bit Size/Type	2" Direct Push	Total Depth Drilled (feet)	16.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	5.8	5.8			10/24/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing		Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A		
Comments				,			



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-6

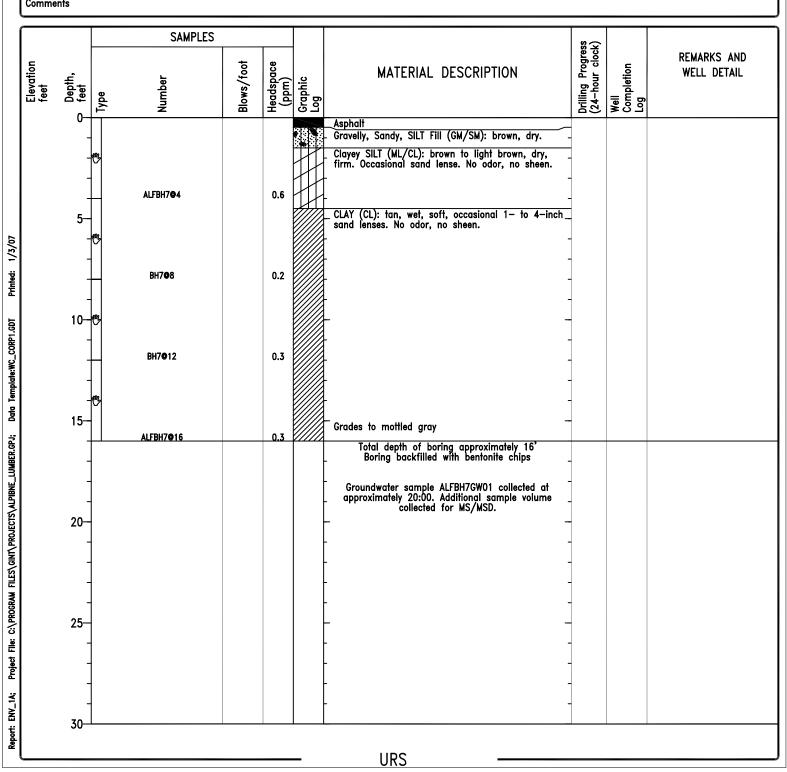
Date(s) Drilled	10/24/06	10/24/06				Checked By	RDE
Drilling Method	Direct Push	Direct Push			2" Direct Push	Total Depth Drilled (feet)	20.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (Ibs/in.)	Pnuematic Hammer
Groundwater Level (feet)	7.2	7.2			10/24/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing		Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A		
Comments							



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-7

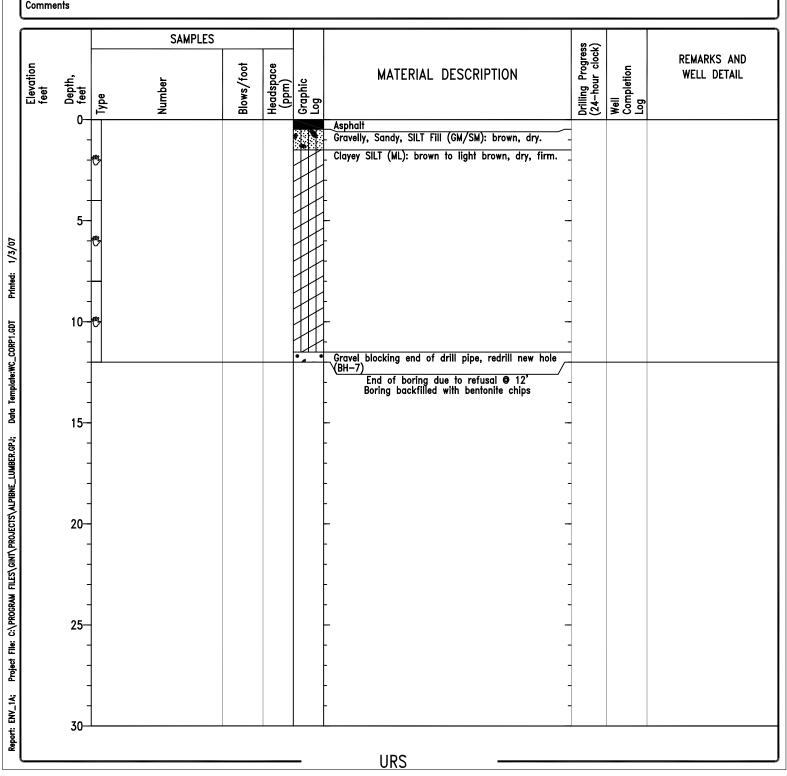
Date(s) Drilled	10/24/06	10/24/06			KAK	Checked By	RDE
Drilling Method	Direct Push	Direct Push			2" Direct Push	Total Depth Drilled (feet)	16.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	8.7	8.7			10/24/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A	Screen Perforation	N/A
Type of Sand Pack	N/A	· ·		Type/Thickne of Seal(s)	ess N/A		
Comments				•			



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-7A

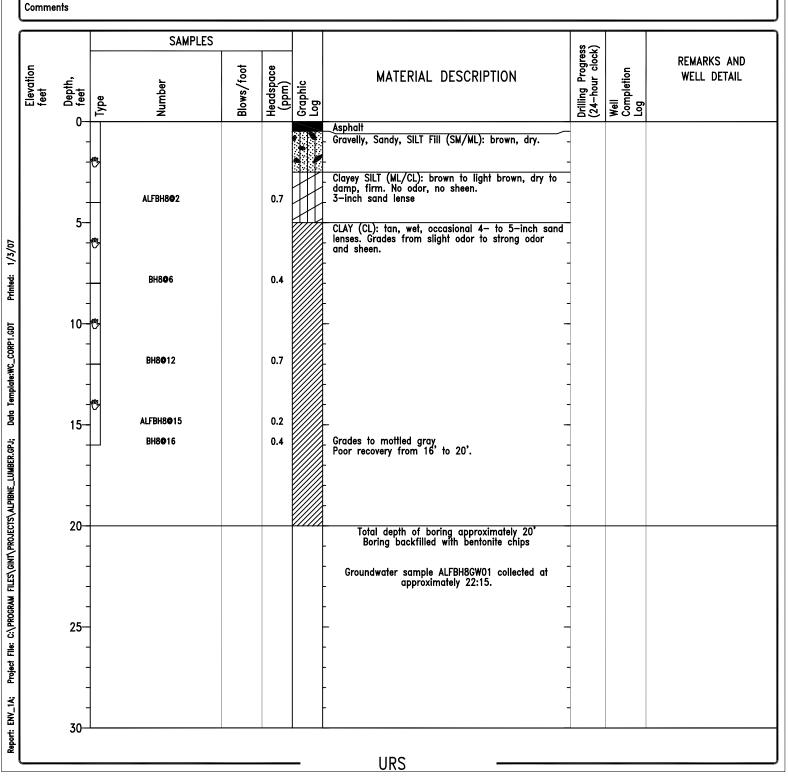
Date(s) Drilled	10/24/06	10/24/06			KAK	Checked By	RDE
Drilling Method	Direct Push	Direct Push			2" Direct Push	Total Depth Drilled (feet)	12.0
Drill Rig Type	Geoprobe 5	Geoprobe 5400			EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	n/a	n/a			10/24/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A	Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A		
Comments							



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-8

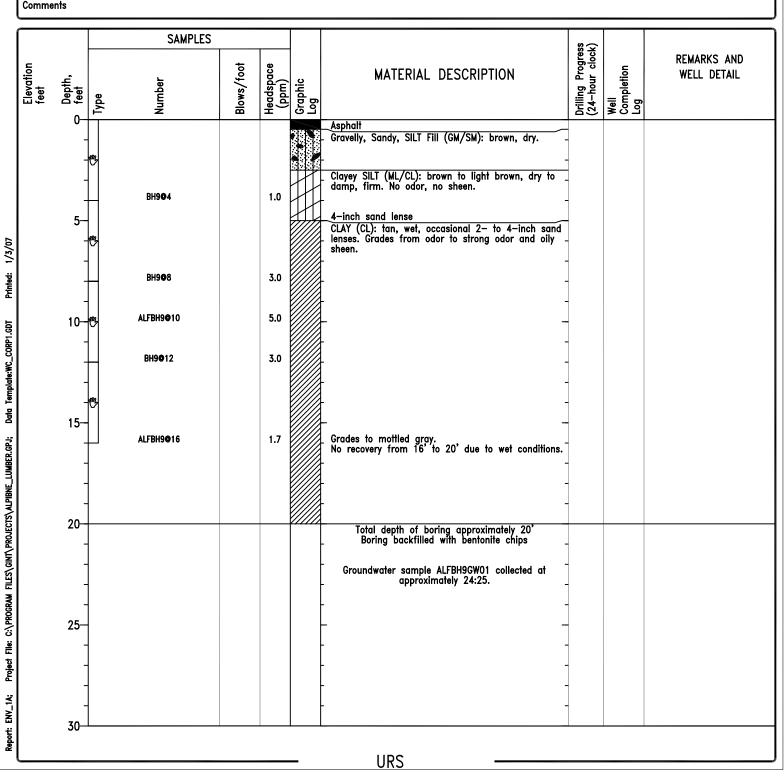
Date(s) Drilled	10/24/06	10/24/06			KAK	Checked By	RDE
Drilling Method	Direct Push	Direct Push			2" Direct Push	Total Depth Drilled (feet)	20.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	8.6	8.6			10/24/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A	Screen Perforation	N/A
Type of Sand Pack	N/A	· ·		Type/Thickne of Seal(s)	ess N/A	•	
Comments				•			



Project Location: Sandpoint, ID Project Number: 36298198

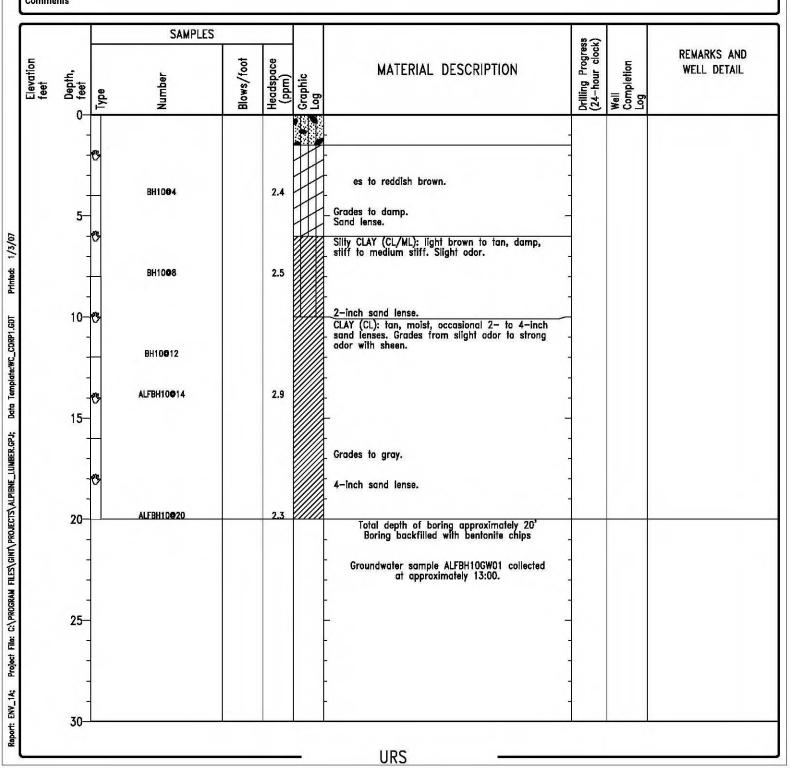
Log of Boring BH-9

Date(s) Drilled	10/24/06	10/24/06			KAK	Checked By	RDE
Drilling Method	Direct Push	Direct Push			2" Direct Push	Total Depth Drilled (feet)	20.0
Drill Rig Type	Geoprobe 5	Geoprobe 5400			EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	7.9	7.9			10/24/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A	Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A	•	
Comments							



Project Location: Sandpoint, ID Project Number: 36298198 Log of Boring BH-10

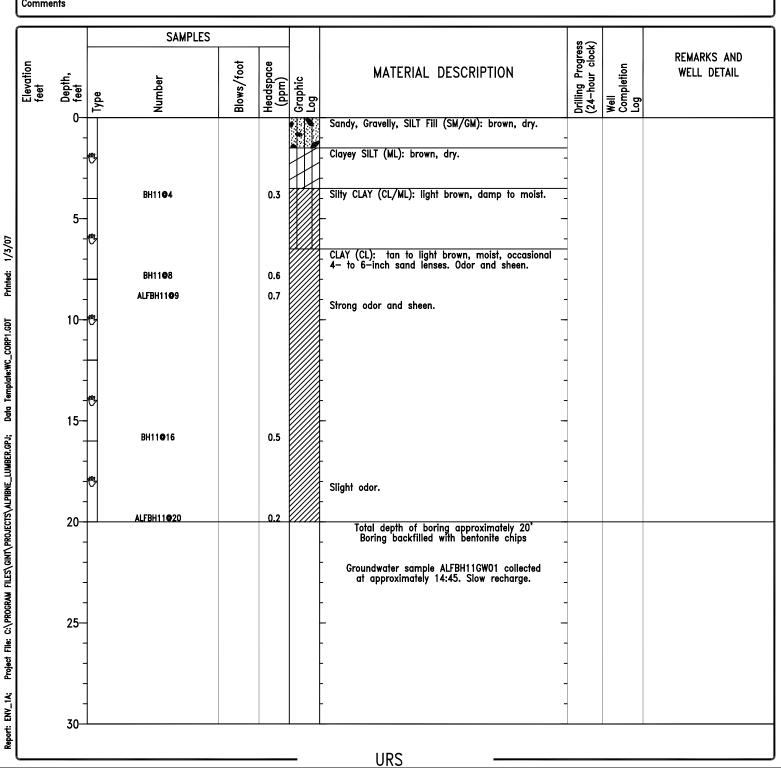
Date(s) Drilled	10/25/06 Direct Push			Logged By	KAK	Checked By	RDE
Drilling Method				Drill Bit Size/Type 2" Direct Push	Total Depth Drilled (feet)	20.0	
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	7.8			Date Measured	10/25/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A	Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickner of Seal(s)	ess N/A	å n.a	
Comments			*				



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-11

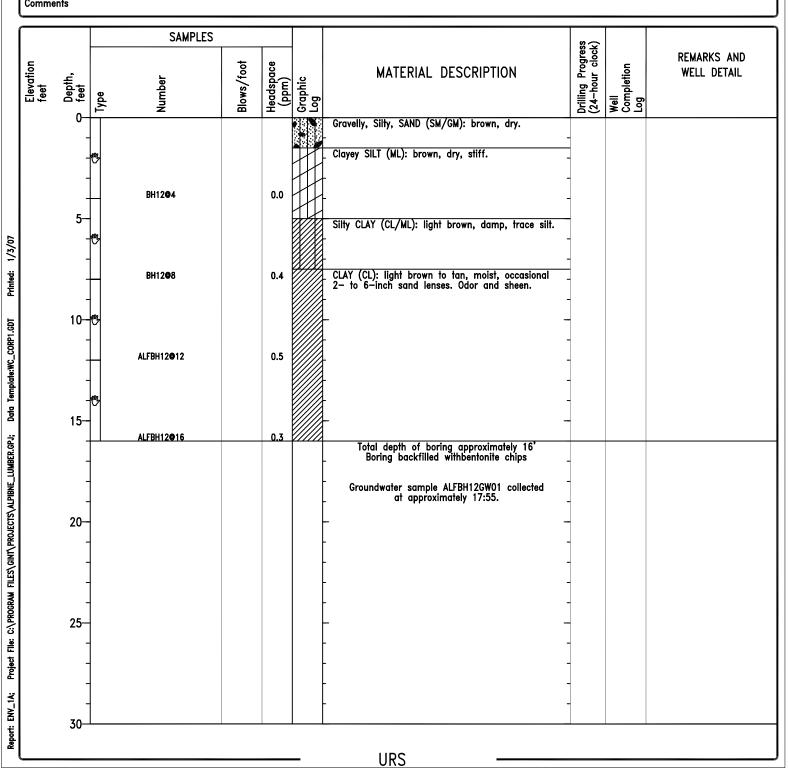
Date(s) Drilled	10/25/06			Logged By	KAK	Checked By	RDE
Drilling Method	Direct Push			Drill Bit Size/Type	2" Direct Push	Total Depth Drilled (feet)	20.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	Not sampled due to caving			Date Measured	10/25/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A	Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A		
Comments				•			



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-12

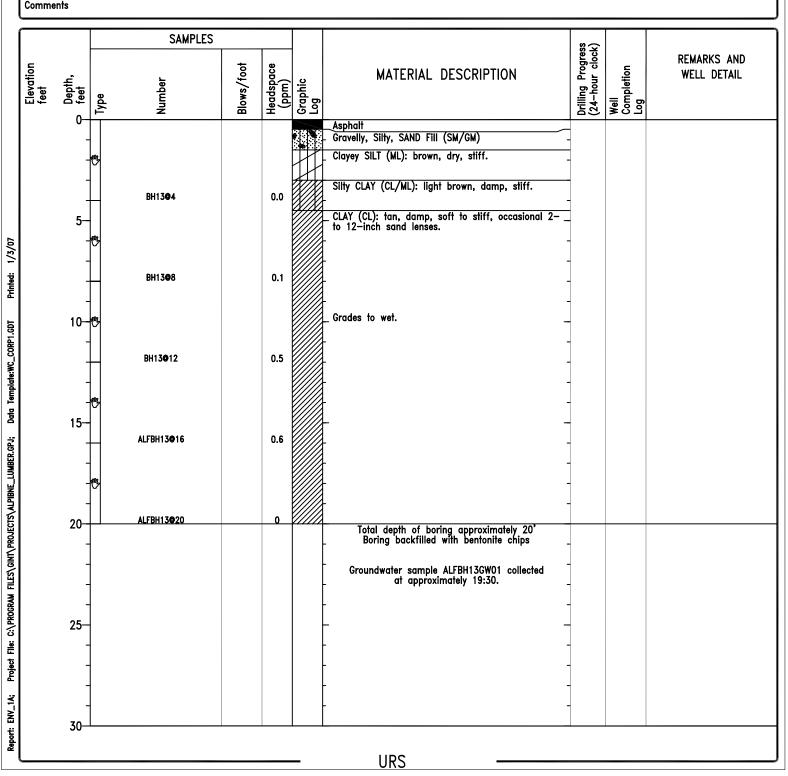
Date(s) Drilled	10/25/06			Logged By	KAK		Checked By	RDE
Drilling Method	Direct Push			Drill Bit Size/Type	2" Direct Push		Total Depth Drilled (feet)	16.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE		Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	8.9			Date Measured	10/25/06		Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A		Screen Perforation	N/A
Type of Sand Pack	N/A	· ·		Type/Thickne of Seal(s)	ess N/A	-		
Comments				•				



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-13

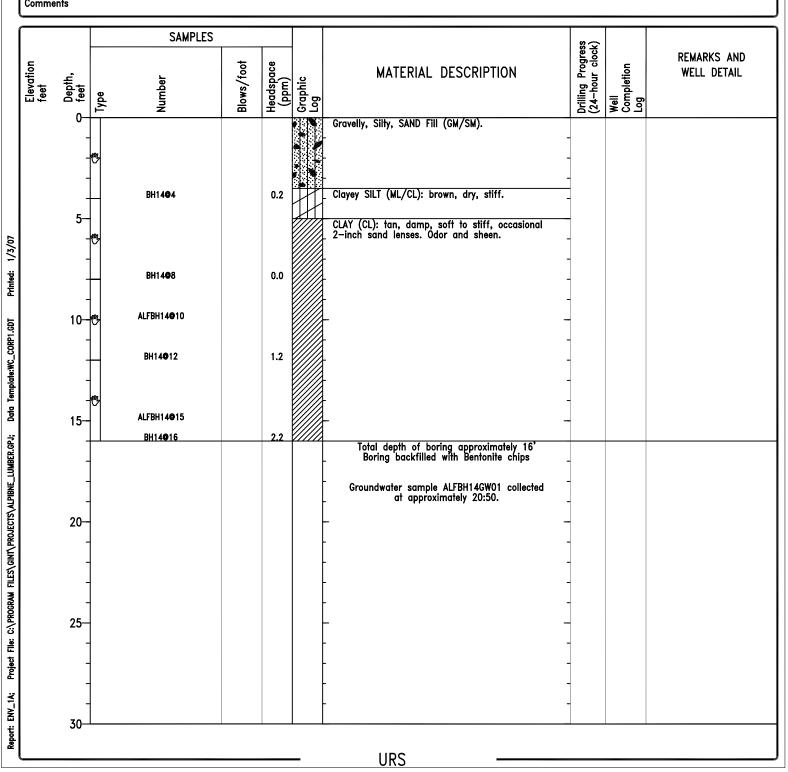
Date(s) Drilled	10/25/06			Logged By		Checked By	RDE
Drilling Method	Direct Push			Drill Bit Size/Type	2" Direct Push	Total Depth Drilled (feet)	20.0
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight/ Drop (Ibs/in.)	Pnuematic Hammer
Groundwater Level (feet)	9.6			Date Measured	10/25/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing		Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A		
Comments							



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-14

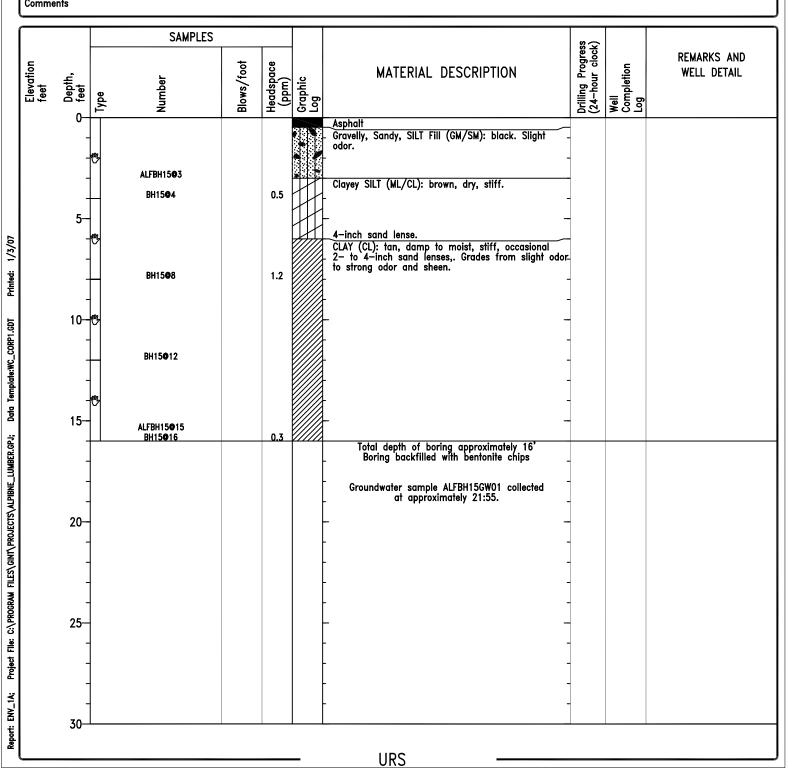
Date(s) Drilled	10/25/06			Logged By	KAK	Checked By	RDE
Drilling Method	Direct Push	1		Drill Bit Size/Type	2" Direct Push	Total Depth Drilled (feet)	16.0
Drill Rig Type	Geoprobe 5	5400		Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	8.7			Date Measured	10/25/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing	N/A	Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A		
Comments				•			



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-15

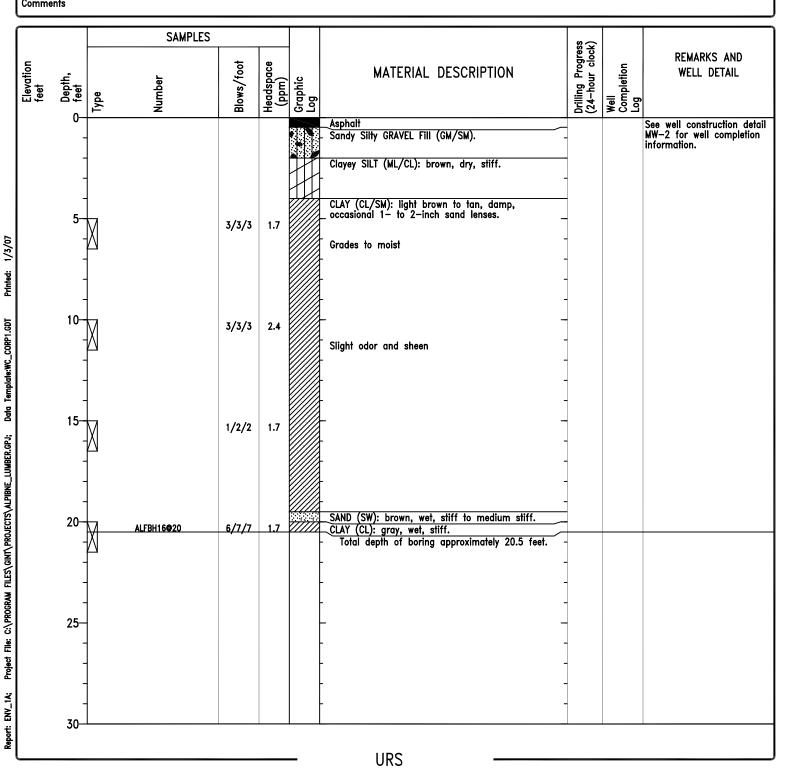
Date(s) Drilled	10/25/06			Logged By		Checked By	RDE
Drilling Method	Direct Push			Drill Bit Size/Type	2" Direct Push	Total Depth Drilled (feet)	16.0
Drill Rig Type	Geoprobe 5	400		Drilling Contractor	EWE	Hammer Weight/ Drop (Ibs/in.)	Pnuematic Hammer
Groundwater Level (feet)	8.4			Date Measured	10/25/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	2"	Diameter of Well (inches)	N/A	Type of Well Casing		Screen Perforation	N/A
Type of Sand Pack	N/A			Type/Thickne of Seal(s)	ess N/A		
Comments							



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-16

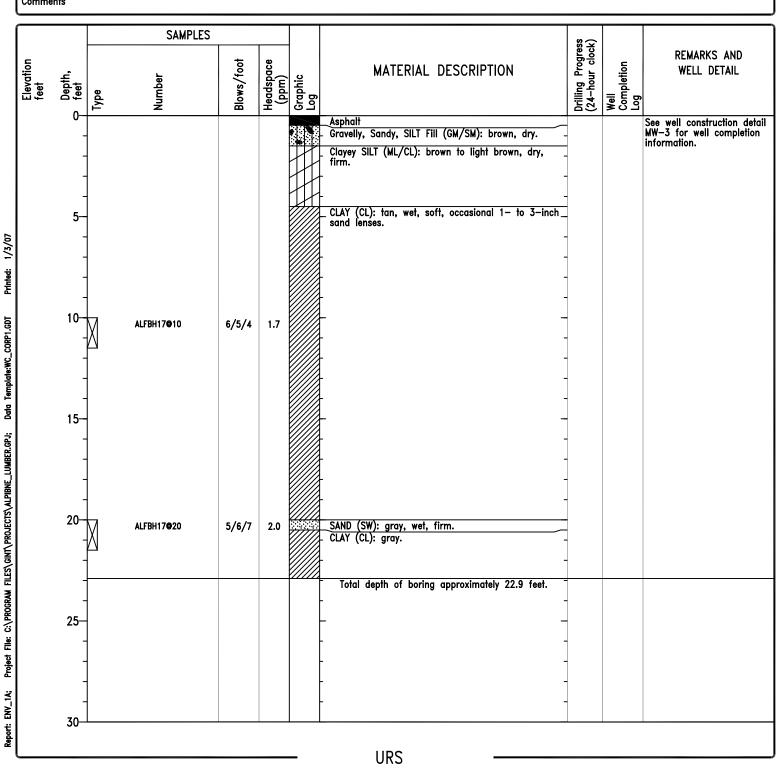
Date(s) Drilled	10/26/06			Logged By		Checked By	RDE
Drilling Method	HSA			Drill Bit Size/Type	8" HSA	Total Depth Drilled (feet)	20.5
Drill Rig Type	Mobile B-61			Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	140 pound hammer with 30-inch drop
Groundwater Level (feet)	14.2			Date Measured	10/26/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	8"	Diameter of Well (inches)	2"	Type of Well Casing		Screen Perforation	0.010
Type of Sand Pack	Colorado Silico	ı Sand 10/20 (9	bags)	Type/Thickne of Seal(s)	ss Wyoming Hole Plug 3/8" (3/4 bag) / 2	2'	
Comments							



Project Location: Sandpoint, ID Project Number: 36298198

Log of Boring BH-17

Date(s) Drilled	10/26/06			Logged By	KAK	Checked By	RDE
Drilling Method	HSA			Drill Bit Size/Type	8" HSA	Total Depth Drilled (feet)	22.9
Drill Rig Type	Mobile B-61	l		Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	140 pound hammer with 30—inch drop
Groundwater Level (feet)	11.2			Date Measured	10/26/06	Approx. Surface Elevation (feet)	2110 MSL
Diameter of Hole (inches)	8"	Diameter of Well (inches)	2"	Type of Well Casing	Schedule 40 PVC	Screen Perforation	0.010
Type of Sand Pack	Colorado Silico	sand 10/20 (	9 bags)	Type/Thickne of Seal(s)	ss Wyoming Hole Plug 3/8" (3 bags) / 4.	4'	
Comments							



#### **MW-2**

#### WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: K. Kees TYPE OF FILTER PACK: Colorado Silica Sand

GRADIATION: 10/20

DRILLING CONTRACTOR: Environmental West Exp. AMOUNT OF FILTER PACK USED: 9 bags

DRILLING TECHNIQUE: HSA Mobile B-61

AUGER SIZE AND TYPE: 8" HSA

TYPE OF BENTONITE: Wyoming Hole Plug

AMOUNT BENTONITE USED: 3/4 bag

BOREHOLE IDENTIFICATION: BH-16 TYPE OF CEMENT: BOREHOLE DIAMETER: 8" AMOUNT CEMENT USED:

WELL IDENTIFICATION: MW-2 GROUT MATERIALS USED: Cement

WELL CONSTRUCTION START DATE: 10/26/06

WELL CONSTRUCTION COMPLETE DATE: 10/26/06 DIMENSIONS OF SECURITY BOX: 8" Flush-mount

SCREEN MATERIAL: Schedule 40 PVC 0.010 TYPE OF WELL CAP: Locking SCREEN DIAMETER: 2" TYPE OF END CAP: 6" Cone

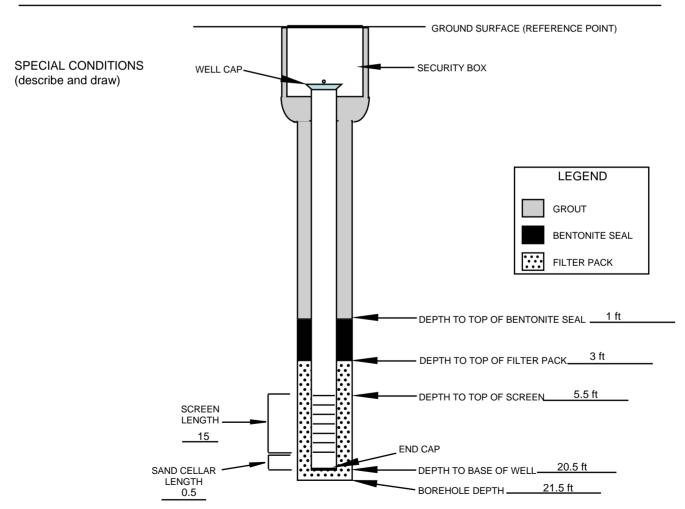
STRATUM-SCREENED INTERVAL (FT): 5.5-20.5ft bgs

**COMMENTS: Relative Well Elevation** 

MW 2: 94.92ft.

CASING DIAMETER: 2"

CASING MATERIAL: Schedule 40 PVC



NOT TO SCALE

INSTALLED BY: Environmental West Exp. INSTALLATION OBSERVED BY: K. Kees

**DISCREPANCIES:** None Observed

#### MW-3

### WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: K. Kees TYPE OF FILTER PACK: Colorado Silica Sand

GRADIATION: 10/20

DRILLING CONTRACTOR: Environmental West Exp. AMOUNT OF FILTER PACK USED: 9 bags

DRILLING TECHNIQUE: HSA Mobile B-61

AUGER SIZE AND TYPE: 8" HSA

AMOUNT BENTONITE USED: 3 bags

TYPE OF BENTONITE: Wyoming Hole Plug

**BOREHOLE IDENTIFICATION: BH-17** 

**BOREHOLE DIAMETER: 8"** 

WELL IDENTIFICATION: MW-3

TYPE OF CEMENT:

AMOUNT CEMENT USED:

GROUT MATERIALS USED: Cement

WELL CONSTRUCTION START DATE: 10/26/06

WELL CONSTRUCTION COMPLETE DATE: 10/26/06 DIMENSIONS OF SECURITY BOX: 8" Flush-mount

SCREEN MATERIAL: Schedule 40 PVC 0.010 SCREEN DIAMETER: 2"

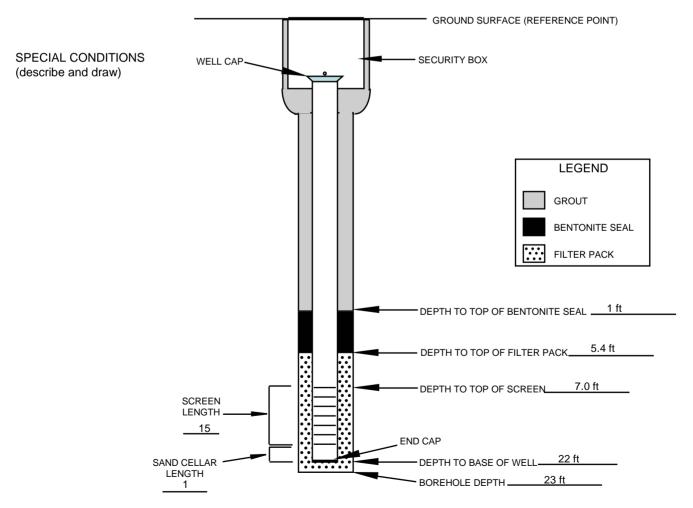
STRATUM-SCREENED INTERVAL (FT): 7-21.5 ft bgs

TYPE OF WELL CAP: Locking TYPE OF END CAP: 6" Cone

**COMMENTS: Relative Well Elevation** 

MW 3: 95.23 ft

CASING MATERIAL: Schedule 40 PVC CASING DIAMETER: 2"



NOT TO SCALE

INSTALLED BY: Environmental West Exp. INSTALLATION OBSERVED BY: K. Kees

**DISCREPANCIES:** None Observed

WELL/PIEZOMETER ID\_HWJ SHEET\_I\_of\_I

PROJECT NAME: <u>ALF</u> OCATION: Sand point OTAL DEPTH (FTOC) <u>20</u>						106					
METHODS OF DEVELOPME  Swabbing  Equipment decontaminated prior to	ENT DeBailing	3	<b>□</b> Pump			cribe	□ NO				
Describe	o de reiopine				,,,,,,	5					
EQUIPMENT NUMBERS:	EC Meter	r			Turbidity M	eter		т	hermomete	er	4
CASING VOLUME INFORM	ATION:										
Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6
PURGING INFORMATION:  Measured Well Depth (B)	14.2 320.5 (B)	14,2 (C)	-6.3				Н,1	~ <del> </del>	↑ C → D —		VATION TOC)
								STAT	*	<u>v</u>	1

Date	Time	Water Level (FTOC)	Volume Removed (gal)	pН	EC	Temperature F or C	Turbidity/ Sand (ppm)	Comments
10/2/60	10:00	14.6	2	-	1	_	High	
h	10:15	_	2	-		-	High	
h	10:45	_	4	-	-	~	High	
X	11:00	-	3	-	-	TE.	High	
11	12:00	_	12	-	-	-	High	
η.	13:00		14	-	_	-	High	10
l1	14:00		14	1	-		High	Slightly less doudy
Ħ	14:30		摩:4	-	-	-	High	Slightly less doudy
7							-	

WELLPIEZOMETER ID MW2

TOTAL DEPTH (FTOC) 🗳	0.5	_ CASI	NG DIAM	ETER_	2"						
METHODS OF DEVELOPM  Swabbing  Equipment decomtaminated prior  Describe	Bailing	-	Pum	ping	Des Ye	scribes	□ №				
QUIPMENT NUMBERS: H Meter* CASING VOLUME INFORM		r		_	Turbidity M	cter		1	Thermomete	т	
Casing ID (inch)	1.0	1.5	2.0	2.2	3,0	4.0	4.3	5.0	6.0	7.0	8.0
Init Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6
PURGING INFORMATION:  Measured Well Depth (B)	0,5 14.2 30.5 (B)						н,с	~ 7	C D D	9.000	VATION TOC)
0	4										

Date	Time	Water Level (FTOC)	Volume Removed (gal)	pН	EC	Temperature F or C	Turbidity/ Sand (ppm)	Comments
106764	10:00	14.6	2	_	J	_	High	
Je	10:15		2	-	-	-	High	
h	10:45	_	4	-	-	_	High	
r	11:00	-	3	-	-		High	
lı.	12:00		12	-			High	
4	13:00		14	-	<u> </u>	_	High	
11	14:00	4	14	-	_	-	High	Slightly less doudy
н	14:30		盘:4	-	_	-	High	Slightly less doudy Slightly less cloud

WELL/PIEZOMETER ID \_MW3 SHEET \_ 1 \_ of \_1

ROJECT NAME: ALF									10/3	26/04	,
OCATION: Sandpois						100					
OTAL DEPTH (FTOC)	1.9	CASIN	G DIAM	ETER _	2"						
ETHODS OF DEVELOPME	ENT										
uipment decomtaminated prior to	Bailing o developme		Pung	oing	Des P Ye		□ NO				
QUIPMENT NUMBERS:  H Meter  ASING VOLUME INFORM.		r			Turbidity M	eter			hermomet	er	
asing ID (inch)	1.0 T	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
nit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6
Leasured Well Depth (B)  Leasured Water Level Depth (C)  ength of Static Water Colume (D)	8, 35 21.9	<b>8</b> 3	_n. 5_14,5 2,38	55 n	*		н,с	~ ,	† C		VATION PTOC)

Date	Time	Water Level (FTOC)	Volume Removed (gal)	pН	EC	Temperature F or C	Turbidity/ Sand (ppm)	Comments
obelou	19:35	-	10	+1977	-	-	High	gritty
34	19:50		40	-	-	_	High	gritty
11	10:30		80		-	-	slightly clas	dy - decrease gritty
11.11	20.135		80	-	-		slightlyd	budy - no grit.
							1 /	0 /
					/			

WELL/PIEZOMETER ID \_MW3 SHEET \_ I \_ of \_

LOCATION: Sandpoil	JT II	DATE	INSTAL	LED:	10/26	106					
TOTAL DEPTH (FTOC) _ 2	1,9	_CASIN	G DIAM	ETER_	2"			-		17.	
METHODS OF DEVELOPME Swabbing Equipment decomtaminated prior to Describe		g	Keum	ping	Des	cribe	□ NO				
EQUIPMENT NUMBERS: pH Meter		er		, d	Turbidity M	eter		_ 1	hermomete	т	
CASING VOLUME INFORMA  Casing ID (inch)	1.0 I	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6
PURGING INFORMATION:  Measured Well Depth (B)	8.35 22.9	<b>8</b> 3	_n. _n. 5_14,5	55 ft.				~ , ↑	↑ C	100000	/ATION
Measured Water Level Depth (C) _ Length of Static Water Colume (D)  Casing Water Volume (E) +	e_x_14.	55 - ;	2,978,	gal				STA	TIC D	<u></u>	

Date	Time	Water Level (FTOC)	Volume Removed (gal)	рН	EC	Temperature F or C	Turbidity/ Sand (ppm)	Comments
10/bb/ou	19:35		10	-	¥		High	gritty
31	19:50		40	_	I	-	High	aritty
N.	10:30		80	_		-	slightly cla	dy - decrease gritty
15	20:35		100	-	1	-	slightlyd	budy - no grit.
1			1		-		11	0

			1		WELL PUR	GING FOR	M		
PROJECT:_	AlpiNo	· Lin	uber I	acilit	-y	WELL ID:	MW-W-	-15	an discussion
OCATION:	Sano	POIN	T, ID		PID READING	(ppm)			
	0/27/0	6			TOTAL PURG	E VOLUME:_		(gal)	
отw: <u>12</u>	.93'		TD: 23	164'		SAMPLING M	ETHOD: L	ow-flor	v
DIAMETER	OF WELL:_	2"	MONUMENT	HEIGHT:		CONDITION	OF WELL:(	good	
Time	Depth to	Flow Rate	Valume	рH	Electrical Conductivity	Turbidity	Dissolved Oxygen	Temperature	Comments
Time	Water (ft)	(Umin)	Purged (L)	μι.	(mS/cm)	(U.T.N)	(mg/L)	(°C)	OOTHINEINS
11:25	12.93						500 00		
11:35	14.82	.12		7.23	0.656	54.2	2.40	11.68	Clear
11:40	15.30	172		7:23	0.656	60.0	2,40	11.67	fr.
11:45	15,50	,12		7.24	0,656	59.6	2.48	11.65	"
11:50	16.09	112		7.24	0.655	553	2.64	11.58	"
11:55	16.56	,12		7.24	0.657	53.1	2.50	11.67	11
12:60	16.80	112		7.24	0.654	52.6	2.27	11.52	
12:05	17.00	112		7.25	0.650	50.1	2.30	11.39	
12:16	17.20	112		7,25	0.649	49.9	2.34	11.36	
12:11	Collec	I En	U. San	ple A	LFHW	-11561	NOI for	8260,8	2705in 8290
		1 110000						1	
									1111
					1-1-1-1				
						1777		-	
DI ADDES	DUMP.		DEDICTALT	IC PUMP	X	WELL CARM	NG:	(8)	
	NUMBER:				*				1
SAMPLE	NUMBER:	HLF M	WUVI	JUNO	1			ме: <u>12:1</u>	TO 4 1 12 12 12 12 12 12 12 12 12 12 12 12 1
ANALYSI	SREQUIRED	):				REQUIRED	7.7547	The second second	40 ml VOA
QA/QC S	AMPLES:		Q1 VI. 198				3-	1-Lt. AM	.ber
ADDITION	NAL COMME	NTS:	1:45	omplet	# 6W C	ollecti	on, De	5001 A	mob to
SAMPLE	R(S): _ K)	AKEE	5.						

					WELL PUR	IGING FOR	M		
PROJECT:_	AlpiNo	e Lin	uber F	Facilit	ч	WELL ID:	MW-W.	-15	
LOCATION:	Sano	1 poin	T, ID		PID READING	i		(ppm)	
DATE: 1	0/27/0	6			TOTAL PURG	E VOLUME:_		(gal)	
ртw: <u>12</u>		- 11	TD: 23	,64'				ow-flor	N
DIAMETER	OF WELL:_	2"	MONUMENT	HEIGHT:		CONDITION	OF WELL:	good	
Time	Depth to Water (ft)	Flow Rate (L/min)	Valume Purged (L)	рН	Electrical Conductivitiy (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments
11125	12.93								
11:35	14.82	.12		7.23	0.656	54.2	2.40	11.68	Clear
11:40	15.30	,12		7.23	0.1056	60,0	2.40	11.67	11
11:45	15,50	.12		7.24	0.656	59.6	2.48	11.65	11
11:50	16.09	112		7.24	0.655	593	2.64	11.58	11
11:55	16.54	,12		7.24	0.657	53.1	2.50	11.67	"
12:60	16.80	112		7.24	0.654	52.6	2.27	11.52	
12:05	17.00	113		7.95	0.650	50.1	2.30	11.39	
12:16	17.20	112		7,25	0.649	49.9	2.34	11.36	
12:11	Collec	f En	U. Sam	ple A	LFHW	-141561	NOI for	8260,8	2705in 8990
							***************************************		
BLADDER	R PUMP:		PERISTALT	IC PUMP:	X	WELL CASIN	NG:	_(ft)	
SAMPLE	NUMBER:	ALFM	W-WI	SEWO	,	SAMPLE CO	LLECTION TI	ME: 12:1	1
	S REQUIRED		*						1/4/19 had 141
		7727			REQUIRED SAMPLE VOLUME(S): 3-40 AL VOA  3-1Lt. Ancher				
QA/QC S/	VAL COUNT	NTS: 1.7	:45 0	mu ala f	e Gul c	nllecti		OTAN W	mob to
ADDITION	AUT COMME	1419: 100	HW-2	i mepite i	un L	VIICLI	VII 1 1/2	COTT Y	mob to
	R(S): K								

ROJECT:_	AloiN	E LV	unber		lity	WELL ID:	MW-2	2	
CATION:	Sar	dooi	NT, I	D	PID READING	(ppm)			
TE: 10	127/0				TOTAL PURG	E VOLUME:		(gal)	
	.58'		TD:	9.44			And the substitute of	w-flow	
METER	OF WELL:_	2"_	MONUMENT				OF WELL:	0	
Time	Depth to Water (ft)	Flow Rate (Umin)	Volume Purged (L)	рН	Electrical Conductivity (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments
:55	9.46								
1:56	9.62	.20		7.60	0.522	204.0	8.88	13.33	Cloudy, slighto
5.01	9.69	.15	7.01	7.38	0.532	1530	7.23	13.54	
5:06	9.71	.15		7.38	0.532	99.0	6.74	13.53	Clear, Slighta
5.11	9.70	, 15		7.37	0.537	90.6	6.76	13,47	ii '
1:16	9.67	.15		7.37	0.531	79.9	10.53	13.50	/
5:21	9.67	,15		7.37	0.531	75.0	6,24	13.61	
15:26	967	.15		7.36	0.529	72.9	6,23	13.44	
5:30	Colle	ct 6	no. So		ALFM	W2 GW		260,82	70 Sim, 8290
					7				
-									
							-		
_		-	-	-				-	
			-			-			-
	-	-	-				bosin-		
LADDER			PERISTALT		X	WELL CASI	NG:	(ft)	
AMPLE N	NUMBER:_/	ALFK	1W261	NOI		SAMPLE CO	LLECTION TI	ME: 13:	50
			0,8270		290	REQUIRED	SAMPLE VOL	UME(s): 3	40ml VOA
MOC 01	MDLES.	M F.M I	0			7,00		Amber	
AVOC SA	MPLES:	none	117 (1)	11505	IUNA) De	2011		1 -6	Then
DOLLION	AL COMME	NTS:	NO U	LLELI	IUNA) DE	LUIV			

MONITOR WELL PURGING FORM

PROJECT: ALGINE Lumber Facility Well ID: MW-Z

LOCATION: Sandpoint, ID PID READING: (ppm)

DATE: 10/27/UW TOTAL PURGE VOLUME: (gal)

DTW: 9.58' TD: 19.44' SAMPLING METHOD: LOW-Flow

DIAMETER OF WELL: 2' MONUMENT HEIGHT: Flush CONDITION OF WELL: 900d

Time	Depth to Water (ft)	Flow Rate (Umin)	Valume Purged (L)	pН	Electrical Conductivity (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments
4:55	9.46								
14:56	9.62	.20		7.60	0.522	204.0	8.88	13.33	Cloudy, slighto
5.01	9.69	.15		7.38	0.532	1530	7.23	13.54	Clear, slighto
15:06	9.71	.15	7,00	7.38	0.532	99.0	6.74	13.53	Clear, Slighte
15:11	9.70	,15		7.37	0.532	90.4	6.76	13,47	ii '
K:16	9.67	.15		7.37	0.531	79.9	6.53	13.50	//
15:21	9.67	,15		7.37	0.531	75.0	6.24	13.61	
15:26		.15		7.36	1.529	72.9	6,23	13.44	
15:30	Colle	ct 4	nv. So	mpl	ALFM	W2GW	of for	260,82	70 Sim, 8290
									,
		-	(		Louis year				
								-	

BLADDER PUMP:	PERISTALTIC PUMP: 1	WELL CASING:(ft)
SAMPLE NUMBER: ALF	MW26WOI	SAMPLE COLLECTION TIME: 13:50
ANALYSIS REQUIRED: 82	60,82705im,8290	REQUIRED SAMPLE VOLUME(5): 3-40 ML VOA
ONIOS CAMPLES. A CO	4.0	3-11+ Auben
ADDITIONAL COMMENTS:	END COLLECTION, I	Pecor
SAMPLERISI: KAKE		7,007

DDO/IECT	AlpiNe	ol wan			WELLID: MW-3				
	Sano				PID READING			(com)	
	127/00		1, +1					(ppm)	
	122	2	21	ilil		TOTAL PURG	STATE OF THE PERSON AND PROPERTY.	ow-flow	(gal)
отw:1.	10	n II	TD: 21.	401	-1				0
DIAMETER	OF WELL:_	7_1	MONUMENT	HEIGHT: 1	- lusti	CONDITION	OF WELL:(	200D	
Time	Depth to Water (ft)	Flow Rate (Umin)	Volume Purged (L)	þН	Electrical Conductivitiy (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments
9:50	7.72								
9:51	7.78	.22		6.42	0.98	32.5	2.31	15,14	
10:07	17.79	,22		7.00	0.96	529	1.19	14.90	
10:12	7.80	.22		700	0.94	52.0	1.18	14.95	
10:17	7.80	,22		7.02	0.96	88.0	1.07	15.09	
10:22	7.80	.22		7.03	0.97	75.2	1.11	15,01	
10:27	71,80	.22		7.03	0.96	743	1.13	15.00	
10:32	7.80	.22		7.04	0.96	72.6	1.14	15.07	
10:35	Collec	16	1. Sam	1 1	FMW3	-	For 82		Sim, 8290
									,
									- 111
					-				
				1					
					-				
-	V - 11-11-	1							
-				1					
	1			1	V	1		1	
					X		NG:		16
	NUMBER:				2000			ME: 10:3	AV. 03
ANALYSI	REQUIRED	826	0, 8.27	DOIM	8290	REQUIRED		TOTAL TOTAL	40 ml DOA
QA/QC S/								3-1Lt.	
ADDITION	NAL COMME	NTS: 1D	:55 F	ND C	DLLECTI	ON, Di	ECON 4	HOB T	To
	R(S): 4/								

		3	CC Committee		WELL PUR				
PROJECT:_	Alpine	Lum	Der F	acility	WELLID: MW-3				
LOCATION:	Sano	poin	T, ID	) '	PID READING	3:		(ppm)	
DATE: 10	127/00	,			TOTAL PURG	SE VOLUME:_		(gal)	
DTW:	72		TD: 21.		SAMPLING M	METHOD: L	ow-flac	0	
DIAMETER	OF WELL:_	Э <u>"</u>	MONUMENT	HEIGHT:_	Flush	CONDITION	OF WELL:(	GOOD	
Time	Depth to Water (ft)	Flow Rate (Umin)	Valume Purged (L)	рH	Electrical Conductivitiy (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments
9:50	7.72		***************************************						
9:51	7.78	.22		6.42	0.98	32.5	2.31	15,14	
10:07	17.79	,22		7.00	0.96	529	1.19	14,90	
10:12	7.80	.22		700	0.94	52.0	1.18	14.95	
10:17	7.80	122		7.02	0.96	88.0	1.07	15.09	
10:22	7.80	.22		7.03	0.97	75.2	1.11	15,01	
10:27	7.80	.22		7.03	0.96	743	1.13	15,00	
10:32	7.80	.22		7.04	0.96	72.6	1.14	15.07	
10:35	Collec	t en	. Sam	ple AL	FHW3	GWOI .	For 821	60, 8270	SiM, 8290
								1	
								-	
BLADDER	PUMP:		PERISTALT	IC PUMP:	X				
SAMPLE	NUMBER:	ALFM	W361	NOI		SAMPLE CO	DLLECTION TI	ME:_ [D:3	5
ANALYSIS	S REQUIRED	826	0 827	OSIM					40 ml DOA
QA/QC S/			1					1.000	AMBER
		NTS: ID	:55 E	ND C	DLLECTI	ON, DI		HOB -	
				V15		/	127		
CAMPLE	Wer Kr	Alone							



SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT REPORT ALPINE LUMBER SANDPOINT, IDAHO

Prepared For: IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY URS PROJECT NO. 36298198

URS CORPORATION 920 North Argonne Road, Suite 300 Spokane, Washington 99212 509.928.4413

July 18, 2007



July 18, 2007

Mr. Steve Gill Brownfields Program Specialist Idaho Department of Environmental Quality 2110 Ironwood Parkway Coeur d'Alene, Idaho 83814

Re: Letter Report - FINAL

Supplemental Environmental Assessment

Alpine Lumber Sandpoint, Idaho

URS Project No. 36298198

Dear Mr. Gill:

URS Corporation (URS) is pleased to present this letter report for Supplemental Environmental Assessment activities conducted at the Alpine Lumber Facility (site), Sandpoint, Idaho. The location of the site is shown in Figure 1 Vicinity Map. The Supplemental Environmental Assessment was completed in general accordance with URS' proposal No. 0708 to Idaho Department of Environmental Quality (IDEQ), dated March 2, 2007 and the URS Cost Estimate spreadsheet dated March 6, 2007. Work was completed at the request of the Idaho Department of Environmental Quality (IDEQ) under Task 4 of the Technical Assistance for the Waste Management and Remediation Program Contract C432. This letter report presents our field work and findings.

#### INTRODUCTION AND BACKGROUND

The Alpine Lumber facility (site) is located at the former location of the Division Street Wood Treating facility. The Division Street Wood Treating facility is western-most of three adjoining facilities described in the US Environmental Protection Agency's Site Inspection Report for the North Sandpoint Wood Treating Facilities, Sandpoint, Idaho, dated May 24, 1996. The general layout of the site is shown in Figure 2, Site Plan Map.

Historic operations at the site included wood treatment operations using creosote wood preservative chemicals. Current site use includes lumber storage and sales. URS conducted a limited Phase II Environmental Site Assessment (ESA) at the site in October 2006. The limited Phase II ESA included drilling 15 direct push soil borings, installing two groundwater monitoring wells, and collecting soil and groundwater samples from the soil borings and new monitoring wells, and collecting a groundwater sample from an existing off-site groundwater monitoring well. Findings of the limited Phase II ESA indicated that site soil and groundwater contained wood treatment chemicals including polycyclic aromatic hydrocarbons (PAHs),

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polychlorinated dibenzodioxins and dibenzofurans (PCDD/Fs), and other semivolatile organic compounds. The findings of the limited Phase II ESA were reported to IDEQ in the letter report Limited Phase II Environmental Site Assessment, Alpine Lumber, Sandpoint Idaho, dated January 16, 2007.

In January 2007, IDEQ conducted a risk evaluation for the site using data collected during the limited Phase II ESA. Findings from this risk evaluation concluded that risk to on-site non-residential workers and off-site residential receptors were unacceptable. The risk evaluation also identified data gaps including lack of off-site groundwater and soil data, lack of groundwater and soil data in the western portion of the site near a proposed structure, uncertainty in regards to soil data used to evaluate the soil vapor intrusion pathway, uncertainty related to groundwater flow direction, and high analytical detection limits in a portion of the limited Phase II ESA analytical results. This supplemental assessment included activities to address data gaps including installation of monitoring wells and on-site vadose zone soil gas probes, soil and groundwater sampling and analysis, and soil vapor sampling and analysis. The data collected will be used in a risk assessment conducted by IDEQ.

#### SCOPE OF SERVICES

The following scope of services was conducted during the supplemental assessment:

- Amended the existing work plan (WP), sampling and analysis plan (SAP), and quality assurance project plan (QAPP) for the supplemental assessment.
- Revised the existing health and safety plan (HASP) for the activities conducted during the supplemental assessment.
- Contacted the one-call public utility notification organization and private utility locator 48-hours in advance of field activities.
- Contracted with Environmental West Exploration to drill three 20-feet-deep direct push soil borings and install a 1-3/4-inch polyvinyl chloride (PVC) monitoring well with a prepack screen assembly into each soil boring. Monitoring wells were installed on March 12, 2007. Soil samples were obtained during drilling.
- Soil cuttings from drilling and decontamination liquids were placed into labeled drums and moved to a site location approved by IDEQ and landowner, pending disposal characterization.
- Surveyed the elevation of the well relative to existing wells using a construction level.
- Each of the new wells were developed by surging and purging approximately five or more well volumes from each well. The wells generally were surged and purged until groundwater removed from the wells had minimal turbidity or until no visual improvement in water clarity is observed following each consecutive surge and purge event.
- Measured depths to water and collected groundwater samples from the three new wells and three existing site wells on March 13, 2007. Each well was purged using low-flow sampling techniques using a peristaltic pump.



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- Submitted six soil samples and seven groundwater samples (including one field duplicate) to TestAmerica Laboratories of Spokane, Washington for laboratory analysis of PAHs and pentachlorophenol (PCP) by EPA Method 8270 SIM and volatile organic compounds by EPA Method 8260B. Samples were submitted under chain-of-custody.
- Contracted with Environmental West Exploration to install six soil vapor probes to approximately 3.5 feet below ground surface (bgs) using direct push drilling methods on May 3, 2007. Each soil vapor probe was constructed using expendable soil vapor collection screens. Clean, washed silica sand was placed around each soil vapor collection screen, and polyethylene tubing was connected to the screen and extended to the ground surface. Hydrated granular bentonite was used to seal each borehole.
- URS collected soil vapor samples from each of the six soil vapor probes on May 9, 2007.
   Soil vapor samples were collected using laboratory supplied sampling media at the rates defined by the analytical method. Each sample was analyzed for PAHs, including naphthalene, by Method TO-13 and volatile organic compounds (VOCs) by Method TO-15. Air Toxics Ltd. of Folsom, California, conducted the analysis. Samples were submitted under chain-of-custody.

#### FIELD ACTIVITIES

Supplemental assessment field activities included installation of three groundwater monitoring wells, monitoring groundwater elevations and sampling groundwater at the locations of the three existing and three new monitoring wells, installation of six soil vapor probes, and collecting soil vapor samples from the six soil vapor probes. Supplemental assessment field activities were conducted between March 12, 2007 and May 9, 2007. The following describes each field task in detail.

Monitoring Well Installation. Three direct-push soil borings, BH-18, BH-19, and BH-20 were completed as groundwater monitoring wells MW-4, MW-5, and MW-6, respectively. Monitoring wells were installed by Environmental West Exploration on March 12, 2007. Locations of monitoring wells are shown in Figure 2.

Monitoring well MW-4 was installed at the Gordon property located across Division Street and east of the Alpine Lumber site. Total depth of monitoring well MW-4 is approximately 20 feet bgs; this well is screened between 4 feet and 19 feet bgs. Monitoring well MW-5 was installed on the Albright and Thurston property located south of the Alpine Lumber site. Monitoring well MW-5 was completed approximately 20 feet deep with a screened interval of 4 feet to 19 feet bgs. Monitoring well MW-6 is located on the Alpine Lumber Site property in the southeast portion of the site. MW-6 is completed approximately 20 feet with a screened interval of 4 feet to 19 feet bgs. Each monitoring well was completed with a flush-to-grade locking well monument. Well construction details for MW-18, MW-19, and MW-20 are presented in Appendix A, Soil Boring Logs and Well Construction Detail.



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Continuous soil samples in 4-foot-increments were collected during drilling and described by a URS geologist using the Unified Soil Classification System (USCS). Boring logs are presented in Appendix A. Two grab samples were collected from each boring for potential laboratory analysis where contamination was most likely based on field observations including photoionization detector headspace, sheen testing, odor, and/or visual indicators. If no indicators of contamination were observed, sample depths were chosen based on field observation in adjacent borings. Soil samples collected for VOC analysis were collected and preserved using EPA Method 5035A methodology. Non-disposable and non-dedicated drilling equipment was decontaminated with high pressure water before drilling each soil boring. Soil conditions encountered during drilling of BH-18, BH-19, and BH-20 are presented in Appendix A.

Groundwater Sampling. On March 13, 2007 the three new wells and three existing on and off site wells were sampled using low flow sampling techniques with a peristaltic pump and dedicated polyethylene tubing. Depth-to-water measurements were obtained before sampling using a decontaminated water level indicator. Sampling procedures generally complied with the approved SAP and QAPP. Appendix B, Field Forms, contains a record of water quality parameter measurements obtained during sampling. Table 1 present depth-to-water measurements collected on March 13, 2007. Groundwater samples were delivered on March 14 to TestAmerica Laboratories in Spokane, Washington under chain-of-custody.

Soil Vapor Probe Installation. Six soil vapor probes, VP-1 through VP-6, were installed at the site on May 3, 2007 using 2-inch diameter direct-push drilling equipment operated by Environmental West Exploration. Each vapor probe was completed to a depth of 3.5 feet. An approximately 6-inch-long vapor point screen was placed into the bottom of each vapor probe soil boring and polyethylene tubing was attached to the vapor point screen. 10/20 silica sand was placed around the screen and tubing to a depth of about 2 inches above the screen. An approximately 20-inch layer of granular bentonite was placed on top of the sand to a depth of about 1.5 feet. Concrete cement was placed on top of the bentonite and a flush-to-grade locking well monuments completed the soil vapor point. The locations of soil vapor probe samples are shown on Figure 2. A diagram showing soil vapor probe construction detail is presented in Appendix A.

Soil Vapor Sampling. URS collected soil vapor samples from the six soil vapor probes on May 9, 2007. Sampling media provided by Air Toxics Ltd, of Folsom, California included XAD tubes for PAH/TO-13A sample collection and 6-liter Summa canisters for VOC/TO-15 sample collection. PAH/TO-13A samples were collected using a calibrated battery powered air pump to draw approximately 240 liters of soil gas through each XAD tube at flow rates ranging between 3.6 to 4.0 liters per minute. Pump flow rates were checked immediately before and immediately after sampling at each vapor probe location; the average flow was used to determine total flow through each XAD tube. Each XAD tube was sealed and placed into an ice chest containing ice immediately following sample collection.



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VOC/TO-15 samples were collected using evacuated Summa canisters. Each Summa canister was connected directly to the vapor probe screen tubing; a laboratory-provided flow controller was used to regulate flow into the canister. Each canister was allowed to fill for approximately 30 minutes at each vapor probe location. XAD tubes and Summa canisters were delivered to the laboratory by common carrier under chain-of-custody.

#### SITE CONDITIONS

Soil Conditions. Site soils encountered during this investigation were predominately silty clays. A fill material comprised of silts, sands and gravels was found between one to four feet across the site. Just below the fill layer a layer of silt was found followed by silty clays and clays to the maximum depth explored. Occasional sand lenses ranging from two to twelve inches were found in the clay layers. Two soil samples for laboratory analysis were collected from each of the monitoring well boreholes; a shallow sample was collected from the interval between 2.5 and 5 feet bgs and a deeper sample was collected from the interval between 14 and 16 feet bgs. During field screening, no evidence of environmental impact was observed in borehole BH-18/MW-4. During field screening, evidence of environmental impact was observed beginning at about 11 feet bgs in borehole BH-19/MW-5 and appeared to decrease by about 19.5 feet bgs. Field screening evidence of environmental impact was observed in BH-20/MW-6 beginning at about 11 feet bgs. Field screening evidence of environmental impact appeared to be decreasing at 20 feet bgs, the maximum depth explored. Based on soil sample analytical results (discussed below) of the March 12, 2007 soil sampling event, concentrations of contaminants exceeded the Initial Default Target Levels (IDTLs) in samples collected from BH-19/MW-5 at 15-16 feet bgs, BH-20/MW-6 at 3-4 feet bgs, and BH-20/MW-6 at 14-15 feet bgs. The extent of impact is consistent with observed conditions during the October 2006 Limited Phase II Environmental Assessment field investigation.

Groundwater Conditions. Depth to groundwater below top of casing ranged from 0.80 feet in MW-2 to 5.01 feet in MW-4 on March 13, 2007; to 3.25 feet in MW-2 to 6.98 feet in MW-W-1S on May 3, 2007. Groundwater flow direction on March 13, 2007 was east-northeast. Note that the measured depth to groundwater in monitoring well MW-5 on March 13, 2007 appeared to be an anomalous, possibly as an artifact of drilling and/or well development. Depth to groundwater below top of casing on April 2, 2007 ranged from 1.53 feet in monitoring well MW-2 to 5.66 feet in MW-W-1S. On April 2, 2007, groundwater flow direction was to the northeast. On May 3, 2007, depth to groundwater below top of casing ranged from 3.25 feet in MW-2 to 6.98 feet in MW-W-1S. Groundwater groundwater flow direction on May 3, 2007 was to the east-southeast. Locally, groundwater gradient might be influenced by a drainage ditch located north of the Alpine Lumber site. During the late fall, winter, and spring when the groundwater elevation is higher than the bottom of the ditch, groundwater might flow in a northerly direction toward the ditch to the north. During drier periods, when the elevation of groundwater is lower than the ditch, groundwater likely flows across the whole site to the south. Groundwater flow directions on March 13, April 2, and May 3, 2007 are shown on Figures 3 to 5, respectively.



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Based on laboratory results (discussed below) of the March 13, 2007 groundwater sampling event, concentrations of contaminants in groundwater exceeded the IDTLs in MW-2, MW-5, and MW-6.

#### ANALYTICAL RESULTS

Soil and Groundwater. Soil and groundwater samples were delivered to TestAmerica Laboratories. Soil and groundwater analysis was conducted on samples from each borehole/monitoring well location. Soil and groundwater samples were analyzed for VOCs by EPA Method 8260B and PAHs and PCP by EPA Method 8270 Modified. Soil analytical results are presented in Table 2, EPA Method 8260B (VOCs) Soil Sample Results, and Table 3, EPA Method 8270 (PAHs/PCP) Soil Sample Results. Groundwater analytical results are presented in Table 4, EPA Method 8260B (VOCs) Groundwater Results and Table 5, EPA Method 8270 (PAHs/PCP) Groundwater Results. Laboratory reports are presented in Appendix C. The results were compared to the Initial Default Target Levels (IDTL) described in the Idaho Risk Evaluation Manual dated July 2004.

Laboratory reports included data quality assurance and quality control (QA/QC) summaries provided by the laboratory. These QA/QC summaries in conjunction with data acceptance criteria outlined in USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA, 1999) and Region 1 EPA, New England Data Validation Functional Guidelines for Evaluating Environmental Analyses (EPA 1996) were reviewed to assess the usability of the data. The following summarizes findings of this review:

- Naphthalene results by EPA Method 8260B for soil samples ALBH19@15-16'and ALFBH20@14-15 were beyond the calibration range of the instrument and reported as "semi-quantitative" by the laboratory. These samples were reanalyzed at a dilution one day outside the method holding time. Consequently, the results from both the initial analysis and analysis at dilution are estimated values. No data quality exceptions were noted for naphthalene in EPA Method 8270 results.
- Analysis of sample ALFBH20@3-4' by EPA Method 8260B followed a sample that had a concentration of naphthalene ten times greater than the calibration range of the instrument. The laboratory case narrative stated that high concentrations in a sample can lead to carry over to the next sample. The laboratory reanalyzed sample ALFBH20@3-4' to determine if a carry over of naphthalene had occurred. Reanalysis results for naphthalene in the sample was non-detect. Reanalysis, though, was performed one day outside the method holding time and is not usable. The naphthalene result from EPA Method 8270 analysis of ALFBH20@3-4' was non-detect. The reanalysis non-detect result and EPA Method 8270 naphthalene non-detect result suggest that carryover likely did occur.
- Surrogate recoveries for samples ALFBH19@2.5-3" and ALFBH20@14-15 during analysis by EPA Method 8270 were outside the control limits. The recovery of



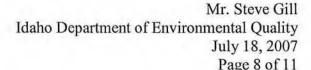
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- nitrobenzene-d5 was greater than zero but less than the lower limit of method QC acceptance criteria while the recovery of the other surrogate compound was within the method QC acceptance criteria. Therefore the data is usable as reported.
- There was no recovery of surrogate benzo(a)pyrene-d12 for samples ALFMW5GW02 (MW-5) and ALFMW505GW02 (MW-5 DUP) during analysis by EPA Method 8270. These samples were run at a dilution of 100. At this dilution the surrogate recovery calculation does not provide useful information. The data is usable as reported.
- Calibration verification recovery was above the method control limit for benzo(k)fluoranthene and benzo(ghi)perylene in QC water samples for EPA Method 8270-HVI. Results below the reporting limit are not impacted. Results above the reporting limit may have a high bias. All benzo(ghi)perylene results were below the reporting limit and therefore are usable as reported. Benzo(k)fluoranthene was below the reporting limit in samples ALFMW3GW02 (MW-3), ALFMW4GW02 (MW-4), and ALFMWW1SGW02 (MW-W-1S) and therefore the results are usable as reported. Benzo(k)fluoranthene in samples ALFMW2GW02 (MW-2), ALFMW5GW02 (MW-5), ALFMW505GW02 (MW-5 DUP), and ALFMW6GW02 (MW-6) were above the reporting limit and therefore may have a high bias and should be considered an estimate. Since the bias is high the actual concentrations are equal to or less than the estimated concentrations.

Refer to Appendix C for complete laboratory QA/QC documentation.

**Soil Vapor Samples.** Six soil vapor samples were submitted to AirToxics Ltd., located in Folsom, California for laboratory analysis of volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) by Environmental Protection Agency (EPA) Methods TO-15-modified and TO-13-modified, respectively. Samples were collected in 6-liter Summa canisters for VOC analysis and on XAD tubes for SVOC analysis. Analytical results are presented in Tables 6 and 7 and laboratory data is located in Appendix C.

The laboratory submitted fully validatable (Level IV) data packages in association with this data. The full data package was reviewed by a URS chemist to assess the usability of the data. Summary data packages were also submitted by the laboratory. Data validation is based on method performance criteria and QC criteria documented in the *Quality Assurance Project Plan Addendum (QAPP)*, Alpine Lumber Facility Supplemental Assessment, Sandpoint, Idaho, March 2007. Hold times, instrument calibrations, instrument performance criteria (tunes), method blanks, surrogate recoveries, internal standard recoveries, laboratory duplicate results, blank spike recoveries (laboratory control samples), and reporting limits were reviewed to assess compliance with applicable methods and the QAPP. Calculation checks were not performed as part of the data quality assessment. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA document USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review, October 1999. The following summarizes findings of this review for the VOC analyses:





- The percent difference for hexachlorobutadiene (-39%) in the continuing calibration analyzed on May 22, 2007 was below the method limit of ±30%. Hexachlorobutadiene was not detected in the associated samples; therefore, the reporting limits for hexachlorobutadiene in all soil vapor samples are potentially biased low and are considered estimated results.
- The laboratory summary data package for the VOCs presents results in parts-per-billion-per-volume (ppbv); however, the associated data table presents the results in ug/m³ to be consistent with risk assessment requirements. The full data packages provided by the laboratory present results in both units. The results presented in the data table were checked against the full data package for correctness and completeness.
- The reporting limits for one or more VOCs in all samples were elevated above the
  reporting limits specified in the QAPP due to the sample volume submitted. The elevated
  reporting limits may affect the use of the data for regulatory comparison, but do not affect
  the use of the data for project objectives.

The following summarizes findings of this review for the SVOC analyses:

- Upon receipt by the laboratory, the cooler temperatures were recorded. The cooler associated with the SVOCs was received above the EPA-recommended limits of 4°C±2°C at 10.7°C; however, the laboratory noted that ice and/or blue ice was present in the cooler. Data were not qualified based on the elevated cooler temperature.
- The naphthalene-d8 internal standard area counts for the initial SVOC analyses of samples VP-1, VP-2, VP-3, VP-4, and VP-6 were acceptable; however, the laboratory noted that the recoveries were near the upper limit due to matrix interferences. The laboratory re-analyzed these samples at dilutions in an effort to mitigate the matrix interference. The results of the re-analyses are reported in the final data summary package; however, due to the dilutions, the reporting limits for all SVOCs are elevated above those specified in the QAPP.
- The URS field personnel did not include the sample volume submitted to the laboratory on the chain-of-custody (COC) for the TO-13 analyses; therefore, the laboratory reported TO-13 results in micrograms (ug). Results were converted to micrograms per cubic meter (ug/m³) by the URS chemist using the field notes. Results for the TO-13 analyses are presented on the data tables in both units.
- The reporting limits for one or more SVOCs in all samples were elevated above the
  reporting limits specified in the QAPP due to the sample volume submitted. The elevated
  reporting limits may affect the use of the data for regulatory comparison, but do not affect
  the use of the data for project objectives.



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#### SUMMARY AND CONCLUSIONS

On March 12, 2007, URS observed the drilling of three soil borings and the installation of three groundwater monitoring wells at the Alpine Lumber site in Sandpoint, Idaho. Soil samples were collected from the three soil borings, and groundwater samples were collected from the three new monitoring wells and three existing monitoring wells on March 13, 2007. Soil and groundwater samples were analyzed for VOCs by EPA method 8260 and PAHs/PCP by EPA method 8270 mod.

Soil samples from two of the boreholes contained one or more contaminants at concentrations exceeding Initial Default Target Levels (IDTL) described in the Idaho Risk Evaluation Manual dated July 2004. Generally, impacts to soil were present in the eastern portion of the site and off-site to the south.

Groundwater samples from three of the groundwater monitoring wells, MW-2, MW-5 and MW-6, contained one or more contaminants at concentrations exceeding the IDTL. Generally, groundwater impacts were present in the eastern portion of the site and off-site to the south. Groundwater elevations have been seasonally rising during the period of this investigation. Groundwater flow direction varied from east-northeast during March and April 2007, to southeast during May 2007.

On May 3, 2007 URS observed the installation of six soil vapor probes at the Alpine Lumber site. Soil vapor probes were installed approximately 3.5 feet bgs. On May 9, 2007, URS collected soil vapor samples from the six soil vapor probes. Soil vapor samples were analyzed for PAHs and naphthalene by Method TO-13A and VOCs by Method TO-15. Four of the soil vapor samples contained PAHs and/or naphthalene at detectable concentrations. All six soil vapor samples contained VOCs at detectable concentrations.



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#### LIMITATIONS

The findings and conclusions documented in this report have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area and in general accordance with the terms and conditions set forth in our Agreement, and with the URS proposal dated March 2, 2007 and the URS Cost Estimate spreadsheet dated March 6, 2007. No other warranty, expressed or implied, is made.

The findings presented in this report are based on conditions observed at specific site locations and sampling intervals at the time of the assessment. Because conditions between the boreholes and sampling intervals may vary over distance and time, the potential always remains for the presence of unknown, unidentified, unforeseen or changed surface and subsurface contamination. Conclusions in this report are based on comparison of chemical analytical results to current regulatory standards.

This report is for the exclusive use of IDEQ and their representatives. No third party shall have the right to rely on our opinions rendered in connection with the services or in this document without our written consent and the third party's agreement to be bound to the same conditions and limitations as IDEQ.

URS appreciates the opportunity to provide these services. Please contact the undersigned regarding any questions related to the information provided in this letter report.

Sincerely,

#### URS CORPORATION

Suzy Cavanagh, PG Environmental Geologist

R. David Enos

Branch Office Manager

**FIGURES** 

Figure 1 – Vicinity Map

Figure 2 – Site Plan Map

Figure 3 – March 2007 Groundwater Elevations



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#### **TABLES**

Table 1 - Groundwater Elevations

Table 2 - EPA Method 8260B (VOCs) Soil Results

Table 3 - EPA Method 8270 (PAH/PCP) Soil Results

Table 4 – EPA Method 8260B (VOCs) Groundwater Results

Table 5 - EPA Method 8270 (PAHs/PCP) Groundwater Results

Table 6 - EPA Method TO-13 Air Results

Table 7 – EPA Method TO-15 Air Results

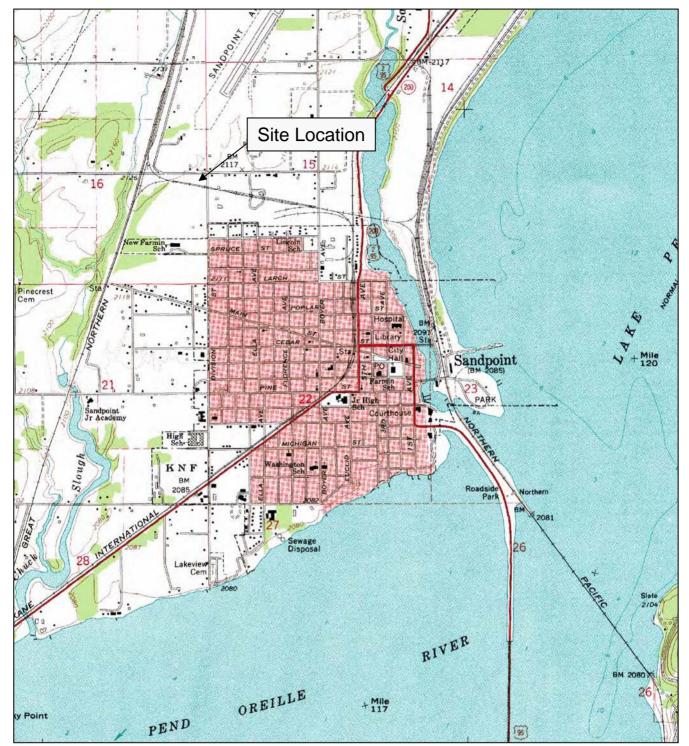
#### **APPENDICES**

Appendix A – Soil Boring Logs and Well Construction Detail

Appendix B - Field Forms

Appendix C – Laboratory Reports



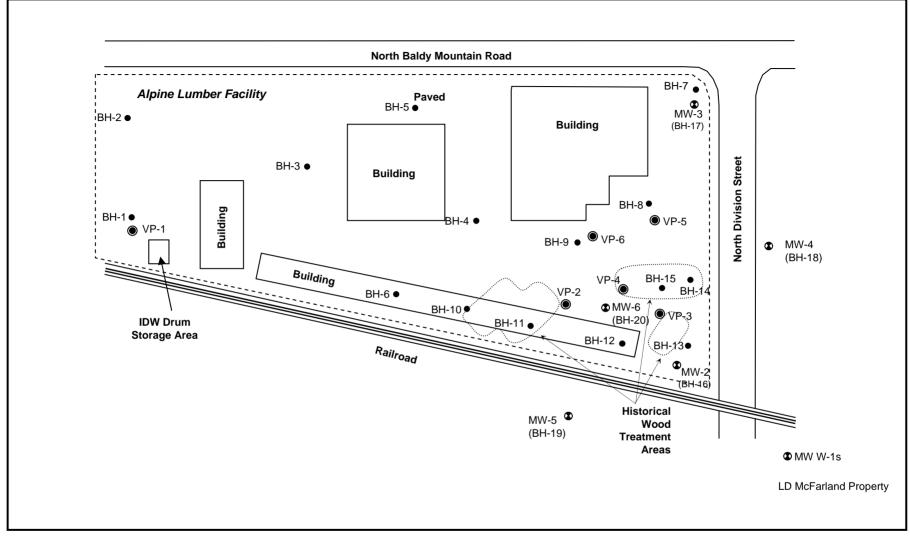


USGS 7.5 Minute Topographic Map, Sandpoint, Idaho, 1968.

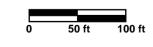
# **VICINITY MAP**

July 2007 36298198.00001 Alpine Lumber Facility Limited Phase II Site Investigation 1400 North Division Avenue Sandpoint, Idaho







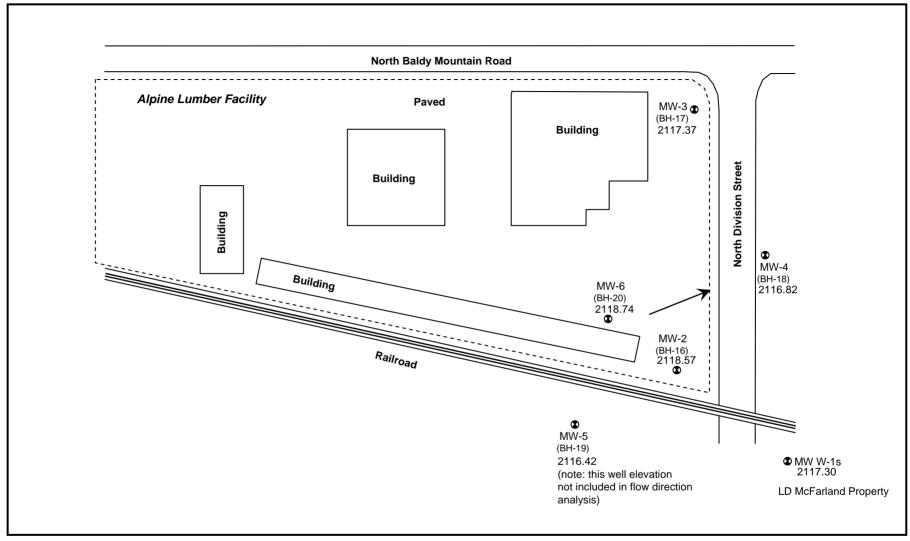


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#### Legend

- Monitoring Well Location and Number
- Soil Vapor Probe Location and Number
- Direct Push Soil Boring Location and Number

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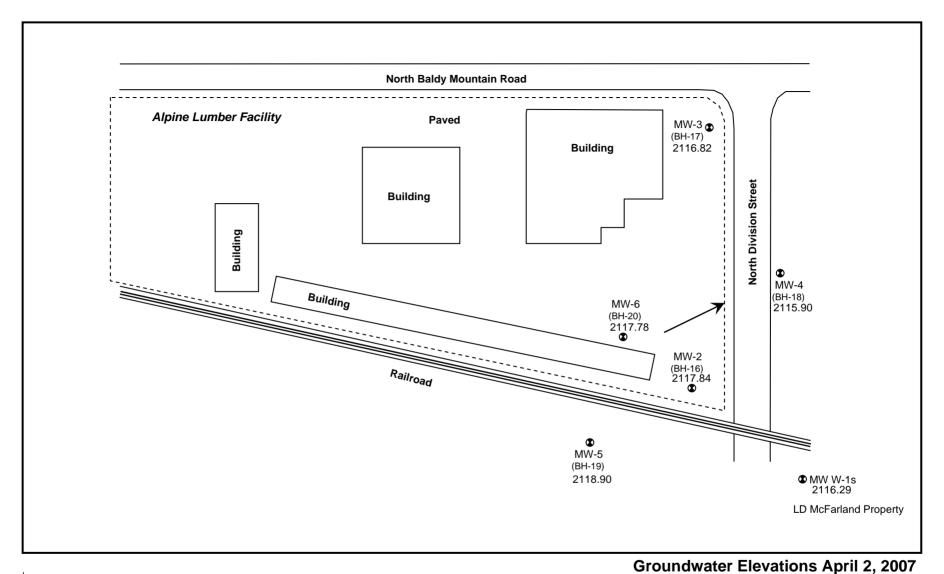
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Legend

2118.90 Groundwater Elevation



Inferred Groundwater Flow Direction Monitoring Well Location July 2007 36298198.00001







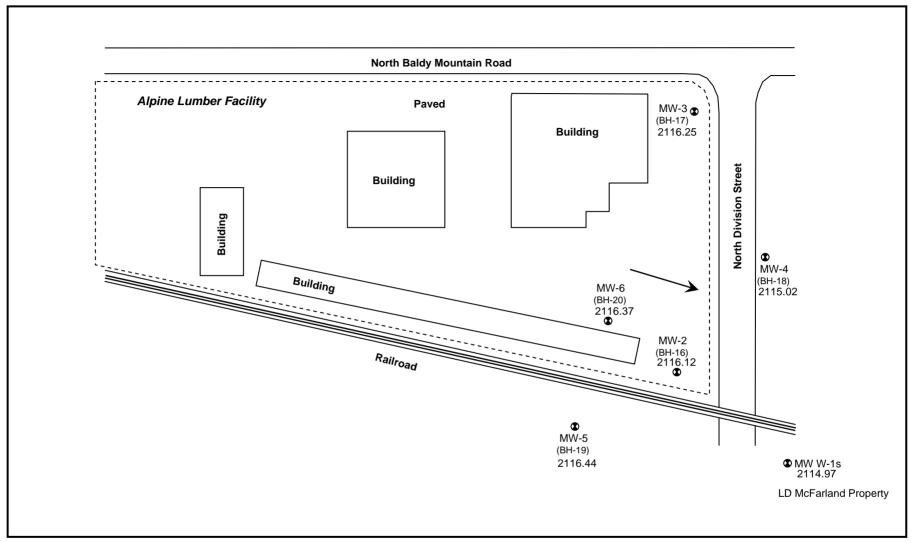
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2118.90 Groundwater Elevation

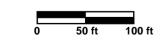
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Inferred Groundwater Flow Direction Monitoring Well Location

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**URS** 

#### Legend

2118.90 Groundwater Elevation



Inferred Groundwater Flow Direction Monitoring Well Location July 2007 36298198.00001

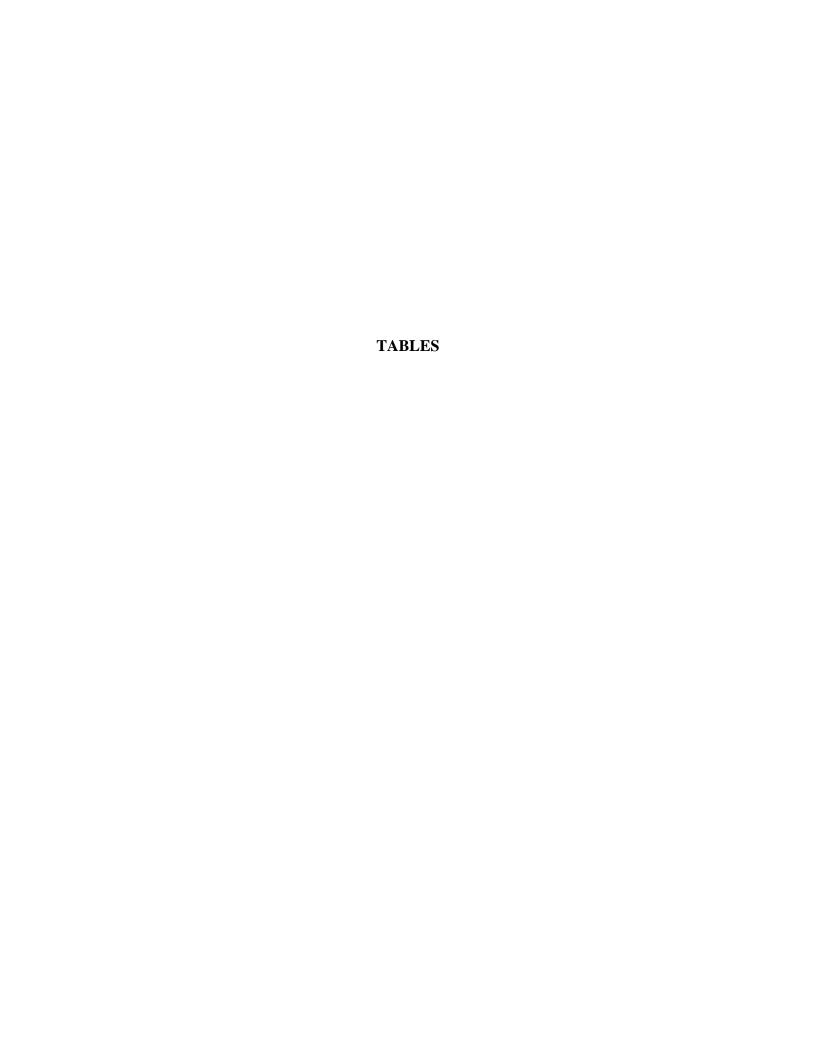


Table 1 Groundwater Elevations Alpine Lumber Sandpoint, Idaho

Monitoring Well	Date	Depth to Water	Elevation (feet)
Number		(feet)	
Elevation <sup>1</sup>			
MW W-1S	10/27/2006	12.93	2109.02
2121.95	11/27/2006	5.03	2116.92
	2/16/2007	4.39	2117.56
	3/13/2007	4.65	2117.30
	4/2/2007	5.66	2116.29
	5/3/2007	6.98	2114.97
MW-2	10/27/2006	9.58	2109.79
2119.37	11/27/2006	1.85	2117.52
	2/16/2007	0.70	2118.67
	3/13/2007	0.80	2118.57
	4/2/2007	1.53	2117.84
	5/3/2007	3.25	2116.12
MW-3	10/27/2006	7.72	2111.96
2119.68	11/27/2006	2.95	2116.73
	2/16/2007	2.49	2117.19
	3/13/2007	2.31	2117.37
	4/2/2007	2.86	2116.82
	5/3/2007	3.43	2116.25
MW-4	3/13/2007	2.22	2116.82
2119.04	4/2/2007	3.14	2115.90
	5/3/2007	4.02	2115.02
MW-5	3/13/2007	3.90	2116.42
2120.32	4/2/2007	1.42	2118.90
	5/3/2007	3.88	2116.44
MW-6	3/13/2007	1.46	2118.74
2120.20	4/2/2007	2.42	2117.78
	5/3/2007	3.83	2116.37

Notes:

1. Top of casing elevation in feet NGVD

# Table 2 - EPA Method 8260B (VOCs) Soil Results<sup>1</sup> Supplemental Assessment Alpine Lumber Facility, Sandpoint Idaho

Analyte	IDTL <sup>2</sup> (mg/kg)	ALFBH18@3.5-4	ALFBH18@14-14.5	ALFBH19@2.5-3	ALFBH19@15-16	ALFBH20@3-4	ALFBH20@14-15
1,1,1,2-Tetrachloroethane	0.0409	<0.115	< 0.0526	< 0.0472	<0.0477	< 0.0499	< 0.0539
1,1,1-Trichloroethane	2.00	<0.115	< 0.0526	< 0.0472	<0.0477	<0.0499	< 0.0539
1,1,2,2-Tetrachloroethane	0.000915	<0.115	< 0.0526	< 0.0472	< 0.0477	<0.0499	< 0.0539
1,1,2-Trichloroethane	0.0141	<0.115	< 0.0526	< 0.0472	<0.0477	<0.0499	< 0.0539
1,1-Dichloroethane	3.48	<0.115	< 0.0526	< 0.0472	< 0.0477	< 0.0499	< 0.0539
1,1-Dichloroethene	0.0388	<0.115	< 0.0526	< 0.0472	< 0.0477	< 0.0499	< 0.0539
1,1-Dichloropropene	-	<0.115	< 0.0526	< 0.0472	<0.0477	< 0.0499	< 0.0539
1,2,3-Trichlorobenzene	-	<0.115	< 0.0526	< 0.0472	<0.0477	< 0.0499	< 0.0539
1,2,3-Trichloropropane	0.000245	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	< 0.0539
1,2,4-Trichlorobenzene	0.692	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	< 0.0539
1,2,4-Trimethylbenzene	0.193	<0.115	<0.0526	<0.0472	0.0938	<0.0499	0.479
1,2-Dibromo-3-chloropropane	0.000975	<0.574	<0.263	<0.236	<0.238	<0.249	<0.270
1,2-Dibromoethane	-	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	< 0.0539
1,2-Dichlorobenzene	5.25	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
1,2-Dichloroethane (EDC)	0.0755	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	< 0.0539
1,2-Dichloropropane	-	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
1,3,5-Trimethylbenzene	0.145	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	0.169
1,3-Dichlorobenzene	0.229	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
1,3-Dichloropropane	-	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
1,4-Dichlorobenzene	0.0755	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
2,2-Dichloropropane	-	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
2-Butanone	11.8	<1.15	<0.526	<0.472	<0.477	<0.499	<0.539
2-Chlorotoluene	1.56	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
2-Hexanone	-	<1.15	<0.526	<0.472	<0.477	<0.499	<0.539
4-Chlorotoluene	-	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
4-Methyl-2-pentanone	17.6	<1.15	< 0.526	<0.472	<0.477	<0.499	<0.539
Acetone	17.4	<1.15	<0.526	<0.472	<0.477	<0.499	<0.539
Benzene	0.0178	<0.0230	<0.0105	<0.00944	<0.00953	<0.00998	<0.0108
Bromobenzene	-	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Bromochloromethane	-	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Bromodichloromethane	0.00268	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Bromoform	0.0292	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Bromomethane	0.0501	<0.574	<0.263	<0.236	<0.238	<0.249	<0.270
Carbon disulfide	5.97	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Carbon tetrachloride	0.0114	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Chlorobenzene	0.618	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Chloroethane Chloroform	0.0533	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
	0.00564	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Chloromethane	0.0231	<0.574 <0.115	<0.263	<0.236	<0.238 <0.0477	<0.249 <0.0499	<0.270 <0.0539
cis-1,2-Dichloroethene cis-1,3-Dichloropropene	0.193 0.00245	<0.115	<0.0526 <0.0526	<0.0472 <0.0472	<0.0477	<0.0499	<0.0539
Dibromochloromethane	0.00245	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Dibromomethane	0.00202	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Dichlorodifluoromethane	2.96	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Ethylbenzene	10.2	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	0.0799
Hexachlorobutadiene	0.0378	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Isopropylbenzene	3.46	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
	1.67 <sup>4</sup>					<0.200	<0.0339
m,p-Xylene Methyl tert-butyl ether	0.0364	<0.459 <0.115	<0.210 <0.0526	<0.189 <0.0472	<0.191 <0.0477	<0.200 <0.0499	<0.216
	0.0400		0.500			0.400	0.500
Methylene chloride Naphthalene	0.0169 1.14	<1.15 <0.230	<0.526 <0.105	<0.472 <0.0944	<0.477 <b>26.6</b>	<0.499 <b>1.53</b>	<0.539 <b>134</b>
n-Butylbenzene	1.14	<0.230	<0.105	<0.0472	<0.0477	<0.0499	<0.0539
n-Propylbenzene	-	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
- ''	1.67 <sup>4</sup>						
o-Xylene		<0.230	<0.105	<0.0944	<0.0953	<0.0998	<0.108
p-Isopropyltoluene	- 4 47	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
sec-Butylbenzene	1.17	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Styrene	1.83	<0.115	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
tert-Butylbenzene	0.852	<0.115 <0.0345	<0.0526	<0.0472	<0.0477	<0.0499	<0.0539
Tetrachloroethene	0.0288		<0.0158	<0.0142	<0.0143	<0.0150	<0.0162
Toluene	4.89	<0.115	<0.0526	<0.0472 <0.0472	<0.0477	<0.0499	<0.0539
trans-1,2-Dichloroethene	0.365 0.00245	<0.115	<0.0526		<0.0477	<0.0499	<0.0539 <0.0539
trans-1,3-Dichloropropene Trichloroethene	0.00245	<0.115 <0.0345	<0.0526 <0.0158	<0.0472 <0.0142	<0.0477 <0.0143	<0.0499 <0.0150	<0.0539
Trichlorofluoromethane	10.4	<0.0345	<0.0158	<0.0142	<0.0143	<0.0150	
Vinyl chloride	0.00963		<0.0526 <0.0526	<0.0472	<0.0477	<0.0499	<0.0539 <0.0539
Notes:	0.00903	<0.115	<u.u320< td=""><td>&lt;0.047∠</td><td>&lt;0.0411</td><td>&lt;0.0499</td><td>&lt;0.0008</td></u.u320<>	<0.047∠	<0.0411	<0.0499	<0.0008

#### Notes.

- 1. All results reported in mg/kg.
- 2. Initial Default Target Levels (IDTL) from Idaho Risk Evaluation Manual, July 2004
- 3. Bold values exceed the IDTL
- 4. ITDL for total Xylenes
- 5. "-" indicates there is no ITDL for the analyte

Samples collect March 12, 2007

Table 3 - EPA Method 8270 (PAHs/PCP) Soil Results<sup>1</sup>
Supplemental Assessment
Alpine Lumber Facility, Sandpoint Idaho

Parameter	IDTL (mg/kg) <sup>2</sup>	ALFBH18@3.5-4	ALFBH18@14-14.5	ALFBH19@2.5-3	ALFBH19@15-16	ALFBH20@3-4	ALFBH20@14-15
1-Methylnapthalene		< 0.0132	< 0.0133	<0.0131	0.783	< 0.0130	7.65
2,4,5-Trichlorophenol	7.38	< 0.659	< 0.667	< 0.656	<2.52	< 0.648	<26.1
2,4,6-Trichlorophenol	0.00436	< 0.659	< 0.667	< 0.656	<2.52	<0.648	<26.1
2-Methylnaphthalene	3.31	<0.0132	< 0.0133	<0.0131	1.41	< 0.0130	15.0
Acenaphthene	52.3	< 0.0132	< 0.0133	<0.0131	1.72	<0.0130	14.9
Acenaphthylene	78	<0.0132	< 0.0133	<0.0131	< 0.0504	< 0.0130	< 0.522
Anthracene	1040	<0.0132	< 0.0133	<0.0131	0.527	< 0.0130	6.01
Benzo (a) anthracene	0.422	< 0.0132	< 0.0133	<0.0131	0.766	< 0.0130	5.38
Benzo (a) pyrene	0.0422	<0.0132	< 0.0133	<0.0131	0.393	< 0.0130	2.58
Benzo (b) fluoranthene	0.422	< 0.0132	< 0.0133	<0.0131	0.417	< 0.0130	2.69
Benzo (ghi) perylene	1180	< 0.0132	< 0.0133	<0.0131	0.154	< 0.0130	0.873
Benzo (k) fluoranthene	4.22	< 0.0132	< 0.0133	<0.0131	0.311	< 0.0130	2.10
Chrysene	33.4	< 0.0132	< 0.0133	<0.0131	0.441	< 0.0130	4.43
Dibenzo (a,h) anthracene	0.0422	< 0.0132	< 0.0133	<0.0131	0.109	< 0.0130	0.629
Fluoranthene	364	< 0.0132	< 0.0133	<0.0131	2.80	< 0.0130	20.7
Fluorene	54.8	<0.0132	< 0.0133	<0.0131	1.49	<0.0130	11.7
Indeno (1,2,3-cd) pyrene	0.422	< 0.0132	< 0.0133	<0.0131	0.174	<0.0130	1.01
Naphthalene	1.14	<0.0132	< 0.0133	<0.0131	3.29	< 0.0130	48.0
Pentachlorophenol	0.00907	< 0.659	< 0.667	< 0.656	<2.52	<0.648	<26.1
Phenanthrene	79.0	<0.0132	< 0.0133	<0.0131	6.08	< 0.0130	46.1
Pyrene	359	<0.0132	<0.0133	<0.0131	2.40	<0.0130	16.7

#### Notes:

- 1. All results reported in mg/kg
- 2. Initial Default Target Levels (IDTL) from Idaho Risk Evaluation Manual, July 2004
- 3. "-" indicates there is no IDTL for the analyte

Samples collected March 12, 2007

# Table 4 - EPA Method 8260B (VOCs) Groundwater Results<sup>1</sup> Supplemental Assessment Alpine Lumber Facility, Sandpoint Idaho

Parameter	IDTL (ug/L) <sup>2</sup>	MW W-1S	MW-2	MW-3	MW-4	MW-5	MW-5 (DUP)	MW-6
1,1,1,2-Tetrachloroethane	2.15	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,1,1-Trichloroethane	200	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,1,2,2-Tetrachloroethane	0.279	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,1,2-Trichloroethane	5.00	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,1-Dichloroethane	1040	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,1-Dichloroethene	7.00	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,1-Dichloropropene	-	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,2,3-Trichlorobenzene	-	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,2,3-Trichloropropane	0.0279	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,2,4-Trichlorobenzene	70.0	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,2,4-Trimethylbenzene	439.0	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,2-Dibromo-3-chloropropane	0.200	<5.00	<5.00	<5.00	<5.00	<100	<100	<10000
1,2-Dibromoethane	-	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,2-Dichlorobenzene	600	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,2-Dichloroethane (EDC)	5.00	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,2-Dichloropropane	5.00	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,3,5-Trimethylbenzene	304	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,3-Dichlorobenzene	9.39	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,3-Dichloropropane	-	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
1,4-Dichlorobenzene	75.0	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
2,2-Dichloropropane		<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
2-Butanone	6260	<10.0	<10.0	<10.0	<10.0	<200	<200	<20000
2-Chlorotoluene	209 209	<1.00 <10.0	<1.00 <10.0	<1.00 <10.0	<1.00 <10.0	<20.0 <200	<20.0	<2000 <20000
2-Hexanone	209						<200	
4-Chlorotoluene	- 8970	<1.00 <10.0	<1.00 <10.0	<1.00 <10.0	<1.00 <10.0	<20.0 <200	<20.0 <200	<2000 <20000
4-Methyl-2-pentanone	9390	<25.0	<25.0	<25.0	<25.0	<500	<500	<50000 <50000
Acetone						<500 <20.0		
Benzene Bromobenzene	5.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<20.0 <20.0	<20.0 <20.0	<2000 <2000
Bromochloromethane	-	<1.00	<1.00	<1.00	<1.00	<20.0 <20.0	<20.0	<2000
Bromodichloromethane	0.901	<1.00	<1.00	<1.00	<1.00	<20.0 <20.0	<20.0	<2000
Bromoform	7.07	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Bromomethane	14.6	<5.00	<5.00	<5.00	<5.00	<100	<100	<10000
Carbon disulfide	1040	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Carbon tetrachloride	4.56	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Chlorobenzene	100	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Chloroethane	19.3	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Chloroform	1.80	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Chloromethane	4.30	<5.00	<5.00	<5.00	<5.00	<100	<100	<10000
cis-1,2-Dichloroethene	70.00	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
cis-1,3-Dichloropropene	0.559	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Dibromochloromethane	0.665	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Dibromomethane	-	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Dichlorodifluoromethane	195	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Ethylbenzene	700	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Hexachlorobutadiene	0.716	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Isopropylbenzene	1040	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
m,p-Xylene	4340 <sup>4</sup>	<2.00	<2.00	<2.00	<2.00	<40.0	<40.0	<4000
Methyl tert-butyl ether	16.9	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Methylene chloride	7.45	<10.0	<10.0	<10.0	<10.0	<200	<200	<20000
Naphthalene	209	<2.00	19.1	2.59	<2.00	182	222	7820
n-Butylbenzene	-	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
n-Propylbenzene	-	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
o-Xylene	4340 <sup>4</sup>	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
p-Isopropyltoluene	-	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
sec-Butylbenzene	104	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Styrene	100	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
tert-Butylbenzene	104	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Tetrachloroethene	5.00	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Toluene	1000	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
trans-1,2-Dichloroethene	1000	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
trans-1,3-Dichloropropene	0.559	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Trichloroethene	3.32	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Trichlorofluoromethane	2050	<1.00	<1.00	<1.00	<1.00	<20.0	<20.0	<2000
Vinyl chloride	2.00	<0.200	< 0.200	<0.200	< 0.200	<4.00	<4.00	<400
Notes:								

- 1. All results reported in micrograms per liter (ug/L)
  2. Initial Default Target Levels (IDTL) from Idaho Risk Evaluation Manual, July 2004
  3. Bold values exceed the IDTL
- 4. ITDL for total Xylenes
- 5. "-" indicates there is no IDTL for the analyte

Samples collect March 13, 2007

# Table 5 - EPA Method 8270 (PAHs/PCP) Groundwater Results<sup>1</sup> Supplemental Assessment Alpine Lumber Facility, Sandpoint Idaho

Parameter	IDTL (ug/L) <sup>2</sup>	MW W-1S	MW-2	MW-3	MW-4	MW-5	MW-5 (DUP)	MW-6
Pentachlorophenol	1.00	< 0.472	< 0.472	< 0.472	< 0.472	<0.472	<0.472	5.32
1-Methylnaphthalene	-	< 0.0943	7.10	0.392	< 0.0943	19.0	14.3	247
2-Methylnaphthalene	41.7	< 0.0943	< 0.943	< 0.0943	< 0.0943	17.9	15.4	300
Acenaphthene	626	< 0.0943	11.9	1.97	< 0.0943	19.6	18.0	231
Acenaphthylene	626	< 0.0943	< 0.943	< 0.0943	< 0.0943	<9.43	<9.43	<18.9
Anthracene	3130	< 0.0943	1.27	0.115	0.138	<9.43	<9.43	21.9
Benzo(a)anthracene	0.0765	< 0.00943	0.248	< 0.00943	< 0.00943	2.06	2.37	5.09
Benzo(a)pyrene	0.200	< 0.00943	< 0.0943	< 0.00943	< 0.00943	< 0.943	< 0.943	<1.89
Benzo(b)fluoranthene	0.0765	< 0.00943	0.236	< 0.00943	< 0.00943	2.30	2.62	3.52
Benzo(ghi)perylene	313	< 0.0943	< 0.943	< 0.0943	< 0.0943	<9.43	<9.43	<18.9
Benzo(k)fluoranthene	0.765	< 0.00943	0.513	< 0.00943	< 0.00943	4.05	3.81	9.68
Chrysene	7.65	< 0.00943	0.380	< 0.00943	< 0.00943	3.35	3.37	6.37
Dibenz(a,h)anthracene	0.417	< 0.00943	< 0.0943	< 0.00943	< 0.00943	< 0.943	< 0.943	<1.89
Fluoranthene	417	< 0.0943	1.42	< 0.0943	< 0.0943	<9.43	<9.43	<18.9
Fluorene	417	< 0.0943	7.57	0.243	< 0.0943	10.4	<9.43	97.9
Indeno(1,2,3-cd)pyrene	0.0765	< 0.00943	< 0.0943	< 0.00943	< 0.00943	< 0.943	< 0.943	<1.89
Naphthalene	209	< 0.0943	5.23	1.46	< 0.0943	236	206	5100
Phenanthrene	313	< 0.0943	4.82	< 0.0943	< 0.0943	10.3	<9.43	96.5
Pyrene	313	<0.0943	<0.943	<0.0943	<0.0943	<9.43	<9.43	<18.9

#### Notes:

- 1. All results reported in ug/L
- 2. Initial Default Target Levels (IDTL) from Idaho Risk Evaluation Manual, July 2004
- 3. "-" indicates there is no IDTL for the analyte  $\,$

Samples collected March 13, 2007

Table 6 - EPA Method TO-13 Air Results Supplemental Assessment Alpine Lumber Facility, Sandpoint Idaho

	V	/P-1	1	VP-2		VP-3		VP-4		/P-5	1	/P-6
Parameter	Uncorrected (ug)	Corrected (ug/m³)	Uncorrected (ug)	Corrected (ug/m³)								
Sample Volume (m³):	-	0.243	-	0.236	-	0.230	-	0.245	-	0.238	-	0.242
Phenol	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
bis(2-Chloroethyl) Ether	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
2-Chlorophenol	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
1,3-Dichlorobenzene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
1,4-Dichlorobenzene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
1,2-Dichlorobenzene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
2-Methylphenol (o-Cresol)	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
bis(2-Chloroisopropyl) Ether	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
N-Nitroso-di-n-propylamine	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
4-Methylphenol/3-Methylphenol	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
Hexachloroethane	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Nitrobenzene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Isophorone	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
2-Nitrophenol	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
2,4-Dimethylphenol	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
Benzoic Acid	<150	<617	<150	<636	<150	<652	<30	<122	<150	<630	<150	<620
bis(2-Chloroethoxy) Methane	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
2,4-Dichlorophenol	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
1,2,4-Trichlorobenzene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Naphthalene	<5.0	<21	13	55	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
4-Chloroaniline	<50	<206	<50	<212	<50	<217	<10	<41	<50	<210	<50	<207
Hexachlorobutadiene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
4-Chloro-3-methylphenol	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
2-Methylnaphthalene	<5.0	<21	<5.0	<21	7.2	31	<1.0	<4.1	<5.0	<21	<5.0	<21
Hexachlorocyclopentadiene	<100	<412	<100	<424	<100	<435	<20	<82	<100	<420	<100	<413
2,4,6-Trichlorophenol	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
2,4,5-Trichlorophenol	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
2-Chloronaphthalene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
2-Nitroaniline	<50	<206	<50	<212	<50	<217	<10	<41	<50	<210	<50	<207
Dimethylphthalate	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
Acenaphthylene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
2,6-Dinitrotoluene	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
3-Nitroaniline	<50	<206	<50	<212	<50	<217	<10	<41	<50	<210	<50	<207
Acenaphthene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
2,4-Dinitrophenol	<100	<412	<100	<424	<100	<435	<20	<82	<100	<420	<100	<413
4-Nitrophenol	<100	<412	<100	<424	<100	<435	<20	<82	<100	<420	<100	<413
2,4-Dinitrotoluene	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
Dibenzofuran	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Diethylphthalate	<50	<206	<50	<212	<50	<217	<10	<41	<50	<210	<50	<207
Fluorene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
4-Chlorophenyl-phenyl Ether	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
4-Nitroaniline	<50	<206	<50	<212	<50	<217	<10	<41	<50	<210	<50	<207
4,6-Dinitro-2-methylphenol	<50	<206	<50	<212	<50	<217	<10	<41	<50	<210	<50	<207
N-Nitrosodiphenylamine	<50	<206	<50	<212	<50	<217	<10	<41	<50	<210	<50	<207
4-Bromophenyl-phenyl Ether	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Hexachlorobenzene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Pentachlorophenol	<100	<412	<100	<424	<100	<435	<20	<82	<100	<420	<100	<413
Phenanthrene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Anthracene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
di-n-Butylphthalate	<25	<103	<25	<106	<25	<109	6.0	24	<25	<105	<25	<103
Fluoranthene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Pyrene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Butylbenzylphthalate	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
3,3'-Dichlorobenzidine	<100	<412	<100	<424	<100	<435	<20	<82	<100	<420	<100	<413
Chrysene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Benzo(a)anthracene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
bis(2-Ethylhexyl)phthalate	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
Di-n-Octylphthalate	<25	<103	<25	<106	<25	<109	<5.0	<20	<25	<105	<25	<103
Benzo(b)fluoranthene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Benzo(k)fluoranthene	<5.0	<21	<5.0	<21	<5.0	<22	<1.0	<4.1	<5.0	<21	<5.0	<21
Benzo(a)pyrene	<5.0	<21	<5.0	<21	<5.0 <5.0	<22	<1.0	<4.1	<5.0 <5.0	<21	<5.0 <5.0	<21
Indeno(1,2,3-c,d)pyrene	<5.0 <5.0	<21	<5.0	<21	<5.0 <5.0	<22	<1.0	<4.1	<5.0 <5.0	<21	<5.0	<21
Dibenz(a,h)anthracene	<5.0 <5.0	<21	<5.0 <5.0	<21 <21	<5.0 <5.0	<22 <22	<1.0	<4.1 <4.1	<5.0 <5.0	<21	<5.0 <5.0	<21 <21
	<0.∪	541	<ວ.∪	<b>SZI</b>	<≎.∪	<b>&lt;</b> 42	< 1.0	<4. I	<0.0	<z1< td=""><td>&lt;0.0</td><td>&lt;<u>&lt;</u>1</td></z1<>	<0.0	< <u>&lt;</u> 1

< - Parameter was analyzed for but not detected above the reporting limit shown.

Corrected - Sample results were reported by the laboratory in ug. Results were converted to ug/m³ using field information. Uncorrected - Sample results as reported by the laboratory.

### Table 7 - EPA Method TO-15 Air Results **Supplemental Assessment** Alpine Lumber Facility, Sandpoint Idaho

Analyte	VP-1	VP-2	VP-3	VP-4	VP-5	VP-6
Freon 12	<5.1	<18	<5.0	<6.2	<5.1	<5.2
Freon 114	<7.2	<26	<7.0	<8.8	<7.2	<7.4
Vinyl Chloride	<2.6	<9.6	<2.6	<3.2	<2.6	<2.7
Bromomethane	<4.0	<14	<3.9	<4.9	<4.0	<4.1
Chloroethane	<2.7	<9.9	<2.6	<3.3	<2.7	<2.8
Freon 11	<5.8	<21	<5.6	<7.0	<5.8	<6.0
1,1-Dichloroethene	<4.1	<15	<4.0	<5.0	<4.1	<4.2
Freon 113	<7.9	<29	<7.7	<9.6	<7.9	<8.1
Methylene Chloride	<3.6	4100	12	<4.4	<3.6	<3.7
1,1-Dichloroethane	<4.2	<15	<4.1	<5.1	<4.2	<4.3
cis-1,2-Dichloroethene	<4.1	<15	<4.0	<5.0	<4.1	<4.2
Chloroform	<5.0	<18	<4.9	<6.1	<5.0	<5.2
1,1,1-Trichloroethane	<5.6	<20	<5.5	<6.8	<5.6	<5.8
Carbon Tetrachloride	<6.5	<24	<6.3	<7.9	<6.5	<6.7
Benzene	12	81	21	60	18	20
1,2-Dichloroethane	<4.2	<15	<4.1	<5.1	<4.2	<4.3
Trichloroethene	<5.5	<20	<5.4	<6.7	<5.5	<5.7
1,2-Dichloropropane	<4.8	<17	<4.6	<5.8	<4.8	<4.9
cis-1,3-Dichloropropene	<4.7	<17	<4.6	<5.7	<4.7	<4.8
Toluene	160	160	140	260	160	180
trans-1,3-Dichloropropene	<4.7	<17	<4.6	<5.7	<4.7	<4.8
1,1,2-Trichloroethane	<5.6	<20	<5.5	<6.8	<5.6	<5.8
Tetrachloroethene	<7.0	<25	<6.8	<8.5	<7.0	<7.2
1,2-Dibromoethane (EDB)	<7.9	<29	<7.7	<9.6	<7.9	<8.1
Chlorobenzene	<4.7	<17	<4.6	<5.8	<4.7	<4.9
Ethyl Benzene	65	75	44	62	52	83
m,p-Xylene	180	87	91	160	150	240
o-Xylene	53	51	79	46	38	79
Styrene	<4.4	<16	<4.3	<5.3	<4.4	<4.5
1,1,2,2-Tetrachloroethane	<7.1	<26	<6.9	<8.6	<7.1	<7.3
1,3,5-Trimethylbenzene	8.7	<18	58	<6.2	<5.1	16
1,2,4-Trimethylbenzene	16	<18	52	12	10	41
1,3-Dichlorobenzene	<6.2	<22	<6.0	<7.5	<6.2	<6.4
1,4-Dichlorobenzene	<6.2	<22	<6.0	<7.5	<6.2	<6.4
alpha-Chlorotoluene	<5.3	<19	<5.2	<6.5	<5.3	<5.5
1,2-Dichlorobenzene	<6.2	<22	<6.0	<7.5	<6.2	<6.4
1,3-Butadiene	<2.3	<8.3	<2.2	<2.8	<2.3	<2.3
Hexane	21	42	24	28	4.5	8.4
Cyclohexane	27	35	20	36	<3.5	21
Heptane	19	23	20	25	6.1	12
Bromodichloromethane	<6.9	<25	<6.7	<8.4	<6.9	<7.1
Dibromochloromethane	<8.8	<32	<8.6	<11	<8.8	<9.0
Cumene	5.8	<18	<4.9	<6.2	<5.1	6.7
Propylbenzene	10	<18	11	<6.2	5.4	15
Chloromethane	<8.5	<31	<8.3	<10	<8.5	<8.8
1,2,4-Trichlorobenzene	<30	<110	<30	<37	<30	<31
Hexachlorobutadiene	<44*	<160*	<43*	<54*	<44*	<45*
Acetone	17	<36	23	30	17	15
Carbon Disulfide	120	52	250	140	160	76
2-Propanol	<10	<37	<9.9	<12	<10	<10
trans-1,2-Dichloroethene	<4.1	<15	<4.0	<5.0	<4.1	<4.2
2-Butanone (Methyl Ethyl Ketone)	5.4	<11	12	8.1	3.4	15
Tetrahydrofuran	<3.0	<11	<3.0	<3.7	4.7	3.1
1,4-Dioxane	<15	<54	<14	<18	<15	<15
4-Methyl-2-pentanone	22	<15	<4.1	5.2	4.7	25
2-Hexanone	<17	<61	<16	<20	<17	<17
Bromoform	<11	<39	<10	<13	<11	<11
4-Ethyltoluene	30	28	90	17	18	61
Ethanol	<7.8	<28	<7.6	<9.4	<7.8	<8.0
Methyl tert-butyl ether	<3.7	<13	<3.6	<4.5	<3.7	<3.8
3-Chloropropene	<13	<47	<12	<16	<13	<13
2,2,4-Trimethylpentane	12	<17	94	37	7.4	9.8
Naphthalene	<22	<78	<21	<26	<22	<22

All results reported in ug/m³.
< - Parameter was analyzed for but not detected above the reporting limit shown.
\* - Estimated value due to quality control issues.

# APPENDIX A

# SOIL BORING LOGS AND WELL CONSTRUCTION DETAILS

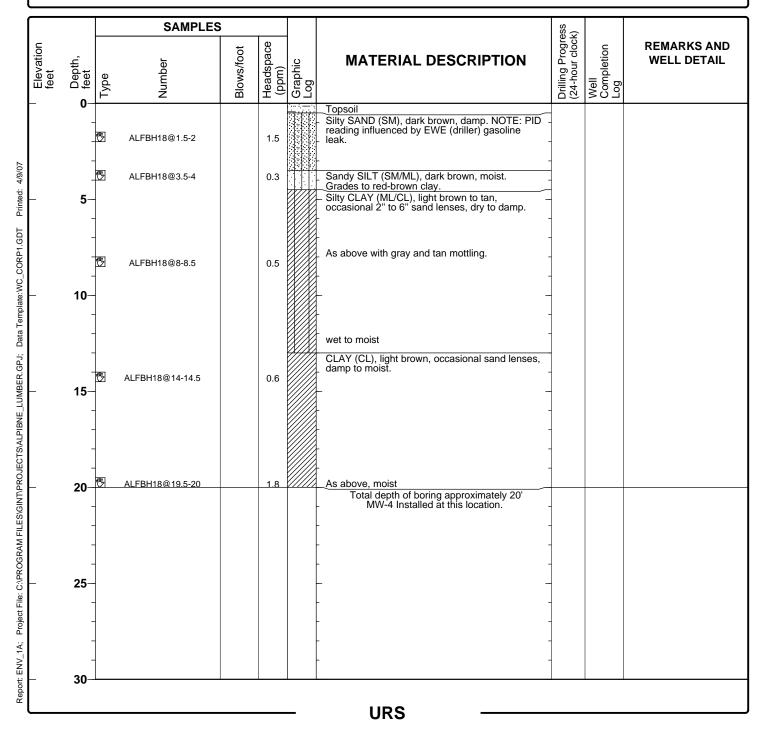
**Project: Alpine Lumber** 

Project Location: Sandpoint, ID Project Number: 36298198

# **Log of Boring BH-18**

Sheet 1 of 1

Date(s) Drilled	3/12/07			Logged By	KAK	Checked By	RDE	
Drilling Method	Direct Pus	Direct Push			3.5" Direct Push	Total Depth Drilled (feet)	20.0	
Drill Rig Type	Geoprobe 5400			Drilling Contractor	EWE	Hammer Weight Drop (lbs/in.)	Pnuematic Hammer	
Groundwater Level (feet)	7.0			Date Measured	3/12/07	Approx. Surface Elevation (feet)	2110.0	
Diameter of Hole (inches)	3.5"	Diameter of Well (inches)	1.75"	Type of Well Casing	Schedule 40 PVC	Screen Perforation .010	Schedule 40 PVC	
Type of Sand Pack	f Dra packed Well			Type/Thickness EZ-Seal Granular of Seal(s) 1/4 of 15lb. bag				
Comments					-			



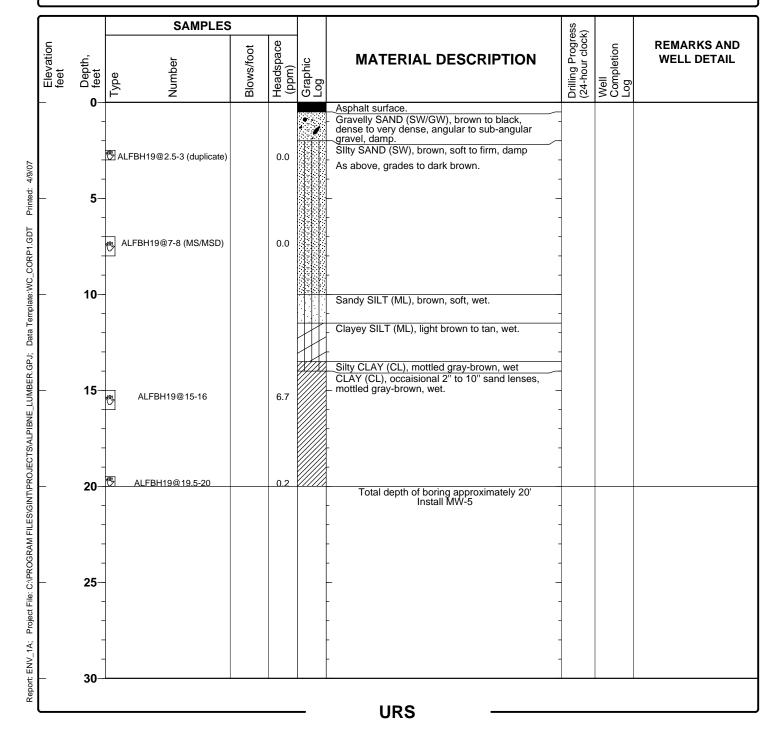
**Project: Alpine Lumber** 

Project Location: Sandpoint, ID Project Number: 36298198

# Log of Boring BH-19

Sheet 1 of 1

Date(s) Drilled	3/12/07			Logged By	KAK	Checked By	RDE
Drilling Method	Direct Pus	Direct Push			3.5" Direct Push	Total Depth Drilled (feet)	20.0
Drill Rig Type	Geoprobe	5400		Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	9.5			Date Measured	3/12/07	Approx. Surface Elevation (feet)	2110.0
Diameter of Hole (inches)	3.5"	Diameter of Well (inches)	1.75"	Type of Well Casing	Schedule 40 PVC	Screen Perforation	.010 Schedule 40 PVC
Type of Sand Pack	Pre-packed	Pre-packed Well			ness EZ-Seal Granular 1/2 of 15lb. bag	•	
Comments					-		



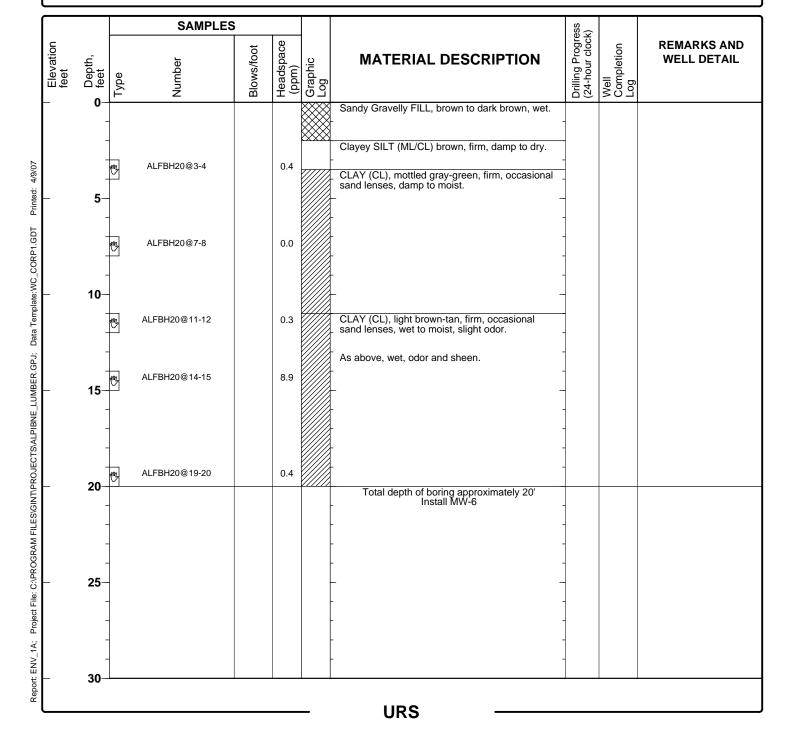
**Project: Alpine Lumber** 

Project Location: Sandpoint, ID Project Number: 36298198

# **Log of Boring BH-20**

Sheet 1 of 1

Date(s) Drilled	3/12/07			Logged By	KAK	Checked By	RDE
Drilling Method	Direct Pus	Direct Push			3.5" Direct Push	Total Depth Drilled (feet)	20.0
Drill Rig Type	Geoprobe	5400		Drilling Contractor	EWE	Hammer Weight/ Drop (lbs/in.)	Pnuematic Hammer
Groundwater Level (feet)	7.5			Date Measured	3/12/07	Approx. Surface Elevation (feet)	2110.0
Diameter of Hole (inches)	3.5"	Diameter of Well (inches)	1.75"	Type of Well Casing	Schedule 40 PVC	Screen Perforation	.010 Schedule 40 PVC
Type of Sand Pack	Pre-packed Well			Type/Thickr of Seal(s)	ness EZ-Seal Granular 1/2 of 15 lb. bag	•	
Comments							



#### **MW-4**

# WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: K. Kees TYPE OF FILTER PACK: Pre-pack

GRADIATION: Pre-pack

DRILLING CONTRACTOR: Environmental West Exp. AMOUNT OF FILTER PACK USED: Pre-pack

DRILLING TECHNIQUE: GeoProbe Direct Push
AUGER SIZE AND TYPE: 3.5" Direct Push

TYPE OF BENTONITE: EZ-Seal Granular
AMOUNT BENTONITE USED: 1/4 bag

BOREHOLE IDENTIFICATION: BH-18 TYPE OF CEMENT: Quickcrete
BOREHOLE DIAMETER: 3.5" AMOUNT CEMENT USED: 1 bag
WELL IDENTIFICATION: MW-4 GROUT MATERIALS USED:

WELL CONSTRUCTION START DATE: 3/12/07 WELL CONSTRUCTION COMPLETE DATE: 3/12/07

SCREEN MATERIAL: Schedule 40 PVC 0.010

SCREEN DIAMETER: 1.5"

STRATUM-SCREENED INTERVAL (FT): 4-19 ft bgs

COMMENTS: Relative Well Elevation

TYPE OF WELL CAP: Locking

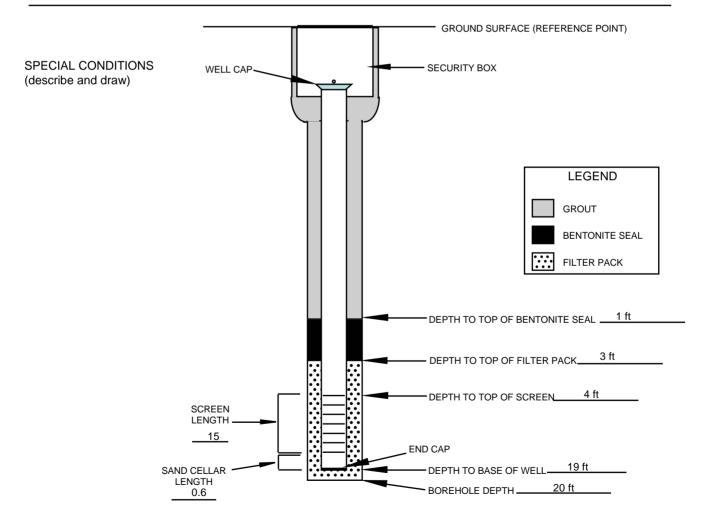
TYPE OF END CAP: 1.5" threaded

DIMENSIONS OF SECURITY BOX: 5" Flush-mount

MW 4: 2119.04 ft.

CASING MATERIAL: Schedule 40 PVC

CASING DIAMETER: 1.75"



NOT TO SCALE

INSTALLED BY: Environmental West Exp. INSTALLATION OBSERVED BY: K. Kees

**DISCREPANCIES:** None Observed

#### **MW-5**

# WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: K. Kees TYPE OF FILTER PACK: Pre-pack

GRADIATION: Pre-pack

DRILLING CONTRACTOR: Environmental West Exp. AMOUNT OF FILTER PACK USED: Pre-pack

DRILLING TECHNIQUE: GeoProbe Direct Push
AUGER SIZE AND TYPE: 3.5" Direct Push

TYPE OF BENTONITE: EZ-Seal Granular
AMOUNT BENTONITE USED: 1/4 bag

BOREHOLE IDENTIFICATION: BH-19
BOREHOLE DIAMETER: 3.5"
TYPE OF CEMENT: Quickcrete
AMOUNT CEMENT USED: 1 bag
WELL IDENTIFICATION: MW-5
GROUT MATERIALS USED:

WELL CONSTRUCTION START DATE: 3/12/07 WELL CONSTRUCTION COMPLETE DATE: 3/12/07

SCREEN MATERIAL: Schedule 40 PVC 0.010

SCREEN DIAMETER: 1.5"

STRATUM-SCREENED INTERVAL (FT): 4-19 ft bgs

DIMENSIONS OF SECURITY BOX: 5" Flush-mount

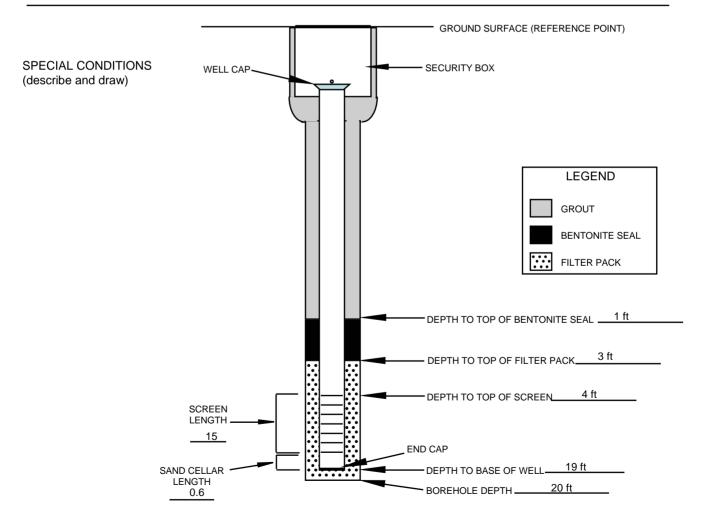
TYPE OF WELL CAP: Locking TYPE OF END CAP: 1.5" threaded

COMMENTS: Relative Well Elevation

MW 5: 2120.32 ft.

CASING MATERIAL: Schedule 40 PVC

CASING DIAMETER: 1.75"



NOT TO SCALE

INSTALLED BY: Environmental West Exp. INSTALLATION OBSERVED BY: K. Kees

**DISCREPANCIES:** None Observed

#### **MW-6**

## WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: K. Kees TYPE OF FILTER PACK: Pre-pack

GRADIATION: Pre-pack

DRILLING CONTRACTOR: Environmental West Exp. AMOUNT OF FILTER PACK USED: Pre-pack

DRILLING TECHNIQUE: GeoProbe Direct Push
AUGER SIZE AND TYPE: 3.5" Direct Push

TYPE OF BENTONITE: EZ-Seal Granular
AMOUNT BENTONITE USED: 1/4 bag

BOREHOLE IDENTIFICATION: BH-20
BOREHOLE DIAMETER: 3.5"
TYPE OF CEMENT: Quickcrete
AMOUNT CEMENT USED: 1 bag
WELL IDENTIFICATION: MW-6
GROUT MATERIALS USED:

WELL CONSTRUCTION START DATE: 3/12/07 WELL CONSTRUCTION COMPLETE DATE: 3/12/07

SCREEN MATERIAL: Schedule 40 PVC 0.010

SCREEN DIAMETER: 1.5"

STRATUM-SCREENED INTERVAL (FT): 4-19 ft bgs

DIMENSIONS OF SECURITY BOX: 5" Flush-mount

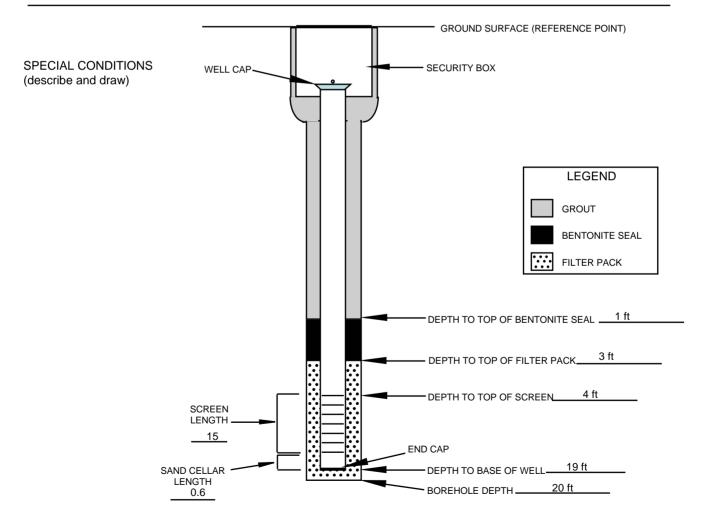
TYPE OF WELL CAP: Locking TYPE OF END CAP: 1.5" threaded

COMMENTS: Relative Well Elevation

MW 5: 2120.20 ft.

CASING MATERIAL: Schedule 40 PVC

CASING DIAMETER: 1.75"



NOT TO SCALE

INSTALLED BY: Environmental West Exp. INSTALLATION OBSERVED BY: K. Kees

**DISCREPANCIES:** None Observed

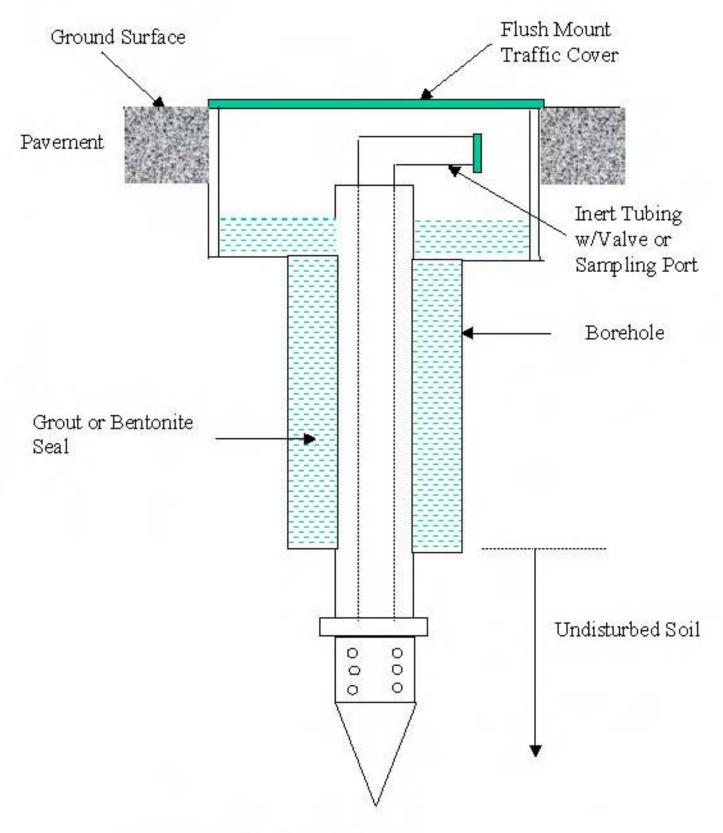


Figure C-4 Schematic of Soil Vapor Probe

# APPENDIX B FIELD FORMS

				MONITOR	WELL PUF	RGING FOR	M	Harr		
PROJECT:_	Alpin	Elu	mber	Facili	ty	WELL ID: 1	1 W-W-	-15		
LOCATION:	Sand	point	Id.			PID READING	(ppm)			
DATE: 3	3/13/0	7				TOTAL PURGE VOLUME:(gal)				
DTW: 4,	65		TD: 23.	64		SAMPLING METHOD: Low- Flow				
DIAMETER	OF WELL:_	2_1	MONUMENT	HEIGHT: 2	185"	CONDITION	OF WELL:_	ood		
Time	Depth to Water (ft)	Flow Rate (U/min)	Valume Purged (L)	pН	Electrical Conductivitiy (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments	
10:30	4,65									
10:40	5.34	.11		5.64	1.07	43.2	14.79	8.41		
10:45	6.02	- ,11		5.76	1.08	25.9	7.49	8,28		
10:50	664	, ] ]		5.80	1.07	18.4	6,53	8.40		
10:55	7.28	.11		5.83	1.07	13.5	6.23	8,40		
11:00	7.62	.11		5.85	1.07	15.1	5.98	8,42		
11:05	7.98	.11		5.85	1.07	12.3	5.98	8.42		
11:10	8.13	,11		5.86	1.07	10.6	5.88	8.44		
11:11	Colle	ct Ev	v. Sa	mple A	LFMW W/S	GWOZ 4	01 8260	48270		
11:37	9.07	1//		5.80	1.06	15.2	9.54	8.44		
			1							
BLADDER	PUMP:		PERISTALTI	C PUMP:	X	WELL CASIN	IG:	(ft)		
SAMPLE N	IUMBER:	ALFMM	1-11-15	GW02		SAMPLE CO	LLECTION TIN	ME: //://	<u> </u>	
	REQUIRED:		6 10						40 ml VOA	
	MPLES:							W. Walter	Lt Amber.	
ADDITION	AL COMMEN	ITS: ne	ear hic	ih traff	ic dust	y road	- diff	erent	key	
5				1		U			1	
SAMPLER	(S):K	Kees								

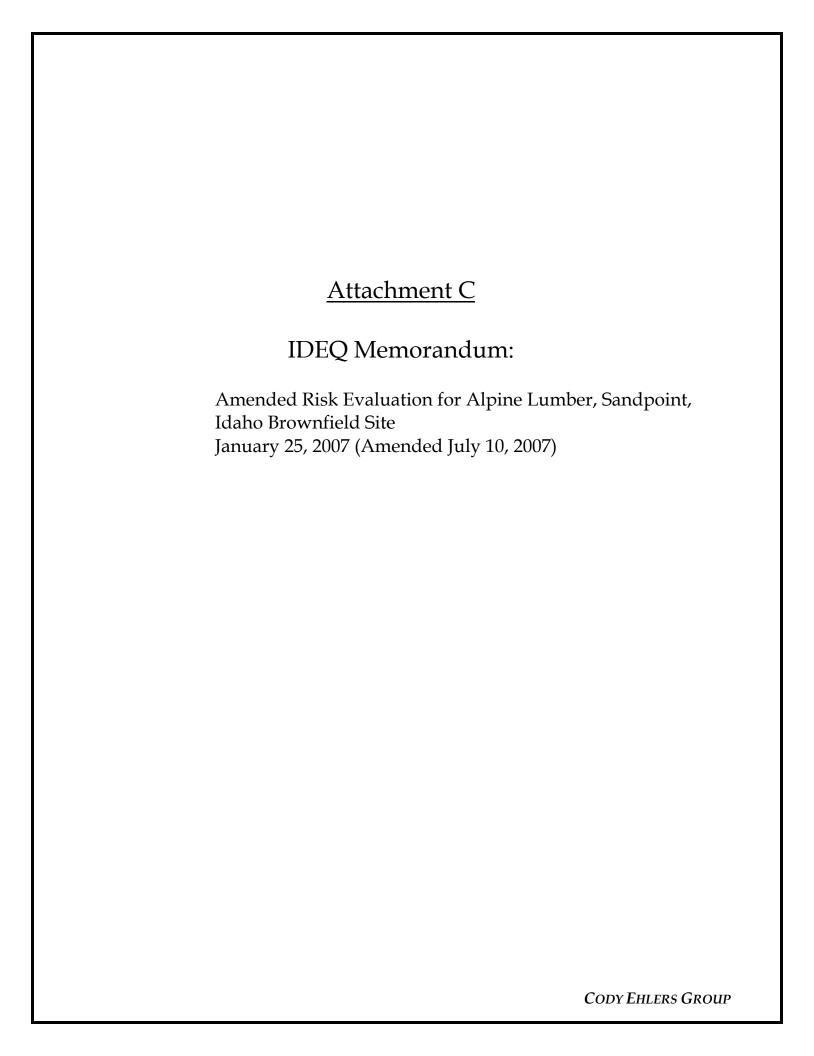
PROJECT:	AloiN	Elu	nber F	facilit	Ly	WELL ID:	MW-2		
LOCATION:	Sandy	point	Id.		/	PID READING			(ppm)
DATE: 7	1/13/0	7				TOTAL PURG	E VOLUME:		(gal)
ртw: 0. <b>8</b>			TD:			SAMPLING M	ETHOD:	ow-flo	DIN .
		2"	MONUMENT	HEIGHT: <u>/</u>		CONDITION		1	
Time	Depth to Water (ft)	Flow Rate (L/min)	Valume Purged (L)	pН	Electrical Conductivitiy (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments
16:30	0.80							F+:	
16:31	1.90	,34		5.87	0.609	48.0	10.80	7.89	
16:36	1.52	1.34		5.87	0.605		669	7.82	
18:41	1,57	,34		5.88	0.601	39.6	4.52	7.85	
16:46	1.59	.34		5.92	0.605		3,60	7.90	
16:51	1,60	134		5.97	0.604	38.4	3.35	793	
18:56	1.61	.34		6.00	0.607	33.1	3.27	7.99	
19:00	Collec	+ Enc	. Sam	ple A	LFMW26	W02			
17:10		134		5.93	0.609	29.3	9.06	7.89	
BLADDER	PUMP:		PERISTALT	IC PUMP:	X	WELL CASIN	IG:	(ft)	
	IUMBER:_		N. sweet and					ME: 17:00	5
	REQUIRED								40 ml UOA
		-020	0 0 4	.0		NEQUINED 3	DAMPLE VOL		1 Lt Amber
QA/QC SA	MPLES:	1/2	u o ada	9001	1				CI MANUEL
ADDITION	AL COMME	NTS: FU	4 Coase	3270	1				
SAMDI ED	(S): K,	Lees							

OJECT:_	Alpini	= Lu	inber	MONTO	WEELFOI	WELL ID:	MW-3		
CATION	Sand	point				PID READING			(ppm)
ATE:_3	13/0	7				TOTAL PURC			(gal)
rw: 2			TD: 21.	45		SAMPLING M	METHOD:	ow-flo	W
AMETER	OF WELL:_	2"	MONUMENT	HEIGHT:	Flush	CONDITION	OF WELL:	od	
Time	Depth to Water (ft)	Flow Rate (L/min)	Valume Purged (L)	рН	Electrical Conductivitiy (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments
18:45	2.31					×			
8:50	2.38	29		5.65	1.38	20,3	6.94	9.36	
8:55	2.38	,29		5,79	1.36	173	2.10	9.40	
9:00	2.38	,29		5.85	1.35	7.0	1.74	9.50	
9:05	2.38	,29		5.90	1.35	3.7	1.57	9.63	
19:10	2.38	129		5.90	1.35	3.8	1,55	9.64	
19:15	2.38	.29		5,91	1.35	3.5	1,52	9.70	^
9:16	Collec	f en	). Saw			5W024	MS/MSD		60+8270
19:55	2.38			5.93	1.34	0,0	4.80	9,95	
							014		
				18		i N			
						*			
						,			
ADDER	PUMP:		PERISTALT	IC PUMP:	X	WELL CASIN	NG:	(ft)	
				IC PUMP:	X		NG:	20	
	IUMBER:_	ALF MN	136W0	2	X	SAMPLE CO	LLECTION TIM	1E: 09:16	1421 TOOL
AMPLE N	IUMBER:	14 Mu 820	13GW02 00,82	2	X	SAMPLE CO	LLECTION TIM	ME: <u>09:16</u> IME(s): 3-	40 ml UOA
AMPLE N NALYSIS	IUMBER:	SZL MS/Mª	136W02 0,82' 5D	2 10		SAMPLE CO	SAMPLE VOLU	ME: <b>09:16</b> IME(s): 3-1	40 ml UDA 1 Lt Ambier
AMPLE N NALYSIS AVQC SA DDITION	IUMBER:	ALF MU 820 MS/MG NTS: Cal	136W02 0,82' 5D	2 10		SAMPLE CO	SAMPLE VOLU	ME: <b>09:16</b> ME(s): 3-1 MJ, 0,00	40 ml UDA 1 Lt Ambier

PROJECT:_	AlpiNE	E Lun			WELL PUF	RGING FOR	. 1				
LOCATION:	Sanc	apoin	f. Id	//		PID READING	:_0.0		(ppm)		
DATE: 3	113/07	z _				TOTAL PURG	E VOLUME:_		(gal)		
DTW:_2	.22		TD: 18.	58		SAMPLING M	ETHOD: L	ow:flo	w		
DIAMETER	OF WELL:_	15"	MONUMENT	HEIGHT:/	Flush	CONDITION	OF WELL:	jood			
Time	Depth to Water (ft)	Flow Rate (L/min)	Valume Purged (L)	pН	Electrical Conductivitiy (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments		
13:35	5.01	.25									
13:36	5.00	,25		5,98	0,903	203.0	3.60	7,20	furbid		
13:41	4.92	,25		5.99	0.900	205.0	3,46	7,25	Slightly turbid		
13:46	4.84	,25		5,99	0,900	216.0	3.27	7.28	clean flowthru		
13:51	4.85	,25		5.99	1,16	50.1	6.94	7.16	clear.		
13:56	4.90	.25		6.00	1.10	45.6	4.86	7.13			
14:01	4.92	,25		6.01	1.09	40.1	3.66	7.20			
14:02	Collec	de	nu, Sa	mple 1	ALFAWY	GWOZ +	-7 A7	0+827	0		
14:25	4.96			6.00	1.10	33.9	4.05	7.13			
									10		
BLADDER			PERISTALTI		<u> </u>		IG:	720			
SAMPLE N	IUMBER:	ALFM	WHGN	102		SAMPLE COLLECTION TIME: 14:02					
ANALYSIS	REQUIRED	: 8260	825	10		REQUIRED S	SAMPLE VOLU	JME(s): 3	40 ml UDA		
	MPLES:							3-	14 Amber		
	AL COMMEN		code	3274							
SAMPLER	(s): K, K	Lees									

		2	0			WELL ID:	MW-5	100000				
LOCATION:	Alpine	poin	*	<del></del>		PID READING	(ppm)					
DATE: 3	13/00	7	775	- 1		TOTAL PURGE VOLUME:(						
DTW: 3	90		TD:18.			SAMPLING METHOD: LOW - Flow						
DIAMETER	OF WELL:_	12"	MONUMENT	HEIGHT:	Fiush	CONDITION C	OF WELL:	yood				
Time	Depth to Water (ft)	Flow Rate (L/min)	Valume Purged (L)	pH	Electrical Conductivitiy (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comments			
15:20	3.90	.34										
15:21	3.69	134		6.19	0.503	5,940	8.42	9.04	turbid.			
15:26	3.35	,34		6.20	0.505	4930	5.92	9.01	Stiturbid			
15:31	3.07	.34		6.20	0.511	109.0	3.31	8.63	Slightlyturbi			
15:36	2.99	.34		6.17	0.506	72.3	1.88	8,57	, ,			
15:41	2.99	,34		6.17	0.506	67.0	1.80	8.58				
15:46	2,99	134		6.17	0.506	62.0	1.70	8.55	4			
15:48	Colle	t en	0. Sam	Dlo AL	FMW56	W02 4 D	plicate	ALF MWS9	W02			
0 45:59	2.99	.34		6.17		133	5.66	8,50				
-												
DIADDEE	DUMP:		DEDISTALT	IC PUMP:	<i>b</i>	WELL CASIN	IG:	/ft)	L.			
BLADDER	NUMBER:				~			٠٠.٠٠	3			
SAMPLE I	NUMBER:	ALFM	W50561	N02			LLECTION TI		8 Val. (c.)			
ANALYSIS	REQUIRED	: 8260	-827	0	100	REQUIRED SAMPLE VOLUME(s): 3-40 N VOA						
QA/QC SA	AMPLES:	Dupli	cate (	@ 16:0	-			3-1	Lt Amber			
ADDITION	NAL COMME	NTS:	ey coo	le 32	74							

PROJECT:	AloiNa	Elun		WICHTION	VVLLL FOR	WELL ID: 1				
PROJECT:_ LOCATION:	Ser	dooil	UT			PID READING				(ppm)
DATE: 3	1310	6				TOTAL PURG				(gal)
DTW: 1,			TD:	1.00		SAMPLING M	ETHOD: LC	ow-Flo	TW.	
DIAMETER			MONUMENT				OF WELL:			
Time	Depth to Water (ft)	Flow Rate (L/min)	Valume Purged (L)	РЩ	Electrical Conductivitiy (mS/cm)	Turbidity (N.T.U)	Dissolved Oxygen (mg/L)	Temperature (°C)	Comi	ments.
Well	pung	ed c	lya	reit For	rechan	ge th	en Sa	mple		
1840	Colle	Ct E	nu! Se	unple	ALFI	4W66	W02			
18:10	4.00	,20	Coll		enu.s				W02	
18:40	6.55	.20	5 gal	6.13	0.704	459.0	10,04	7.09		
		-								
					-		-			
				-						
				-						
				-						
	4									
BLADDER	PUMP:	-	PERISTALT	2017/09/09			NG:	2	11111	Ciuna
SAMPLE N		<i>5</i> 10	y	18-1	U			ME: ALF		
ANALYSIS	REQUIRED	: 820	60 8	270		REQUIRED :	SAMPLE VOL	JME(s): 3		
QA/QC SA	MPLES:			OP:		-	٨	3-	1 Lt 1	Imbor
ADDITION	AL COMME!	NTS: W	nable.	to 100 de 32	k-casin	ng need	ls to	be tri	mmea	<i>l.</i>
SAMPLER	(S): L	Kees	,							



January 25, 2007 (Amended July 10, 2007)

#### **MEMORANDUM**

Subject: Amended Risk Evaluation for Alpine Lumber, Sandpoint, Idaho Brownfield Site

This memorandum contains an addendum to the original risk evaluation performed in January 2007. The addendum evaluates additional ground water, soil, and soil vapor data collected in March and May 2007 to fill data gaps and reduce the uncertainty described in the January memorandum. The addendum is attached to the end of the original memorandum, which is reproduced in its entirety without modification.

This memorandum describes the assumptions and data used in performing a risk evaluation for the Alpine Lumber facility located on Division Street in Sandpoint, Idaho. The risk evaluation was performed according to methods and the process outlined in the IDEQ Risk Evaluation Manual (REM) published in July 2004 and using the associated REM software. The data used for the evaluation was obtained from assessment activities conducted in October 2006 by URS, Inc., under contract to IDEQ, through the Brownfields Assessment Program. Details of the assessment are available in the URS report. Figure 6 from this report (and included in this memorandum) provides a site map showing key site features, including boring and monitoring well locations, presumed areas of pole treatment, and existing and proposed structures. Appendix A contains selected pages of output from the risk evaluation performed using the (REM) software.

# Receptors

On-site receptors are assumed to be non-residential workers at the facility and construction workers employed in making proposed improvements to the property (constructing new buildings). Off-site receptors are assumed to be both non-residential and residential receptors. This assumption is based on existing land uses in the general downgradient direction of ground water flow, determined during the Brownfields assessment and from previous investigations performed at and near the site.

# Pathways/Routes of Exposure

Complete or potentially complete pathways/routes of exposure for the identified on and off site receptors includes the following:

#### On-Site

**Construction Worker** exposure to contaminated surficial and subsurface soil via ingestion, inhalation of vapors, and dermal contact.

**Non-Residential Worker** exposure via indoor inhalation of vapors from contaminated soil and ground water. Based on the depth of the occurrence of contamination noted during assessment activities (>3-5 feet below ground surface) the likelihood of direct contact with these materials by facility employees is low. Surficial soil exposures were

considered an incomplete pathway because of the significant depth (5 feet) at which contamination was first noted in borehole logs.

**Protection of Ground Water**. Soil leaching from source areas on-site to ground water with transport to potential receptors off-site.

#### Off-Site

**Residential** and **Non-Residential** exposure via indoor inhalation of vapors from contaminated ground water which has moved off site from the facility. The assumption of only this pathway also includes the assumption that the impacted shallow ground water associated with the site has a low probability for use as drinking water.

# **Chemicals of Concern (COC)**

Based on detections of chemicals from soil and ground water samples obtained during assessment activities the following chemicals were included in the risk evaluation:

#### **SVOC**

2-Methylnaphthalene

Acenaphthene

Anthracene

Benzo(a)anthracene

Benzoz(a)pyrene

Benzo(b)fluoranthene

Benzo(g,h,i)perylene

Benzo(k)fluoranthene

Chrysene

Dibenzo(a,h)anthracene

Fluoranthene

Fluorene

Indeno (1,2,3-cd)pyrene

Pentachlorophenol

Phenanthrene

Pyrene

#### VOC

1,2,4 Trimethylbenzene Ethylbenzene Naphthalene Tert-Butylbenzene

# **Site- Specific Fate and Transport Parameters**

The default values for most fate and transport parameters were retained for the evaluation. The values which were modified to reflect site-specific conditions included the depths to soil and ground water contamination sources for the purposes of evaluating vapor intrusion. For vapor intrusion via soil volatilization the depth to the soil source was

5 feet (153 cm), the value commonly noted in borehole logs where an odor or sheen was first indicated. The depth to the bottom of the soil source was the average depth of ground water which at the site was 8 feet (244 cm). The depth to the ground water source was also chosen as 8 feet (244 cm).

The off-site point of exposure and compliance was assumed to be the eastern side of North Division Street, a distance of 100 feet from the east edge of the source area (approximately the location of BH-15).

## **Representative COC Concentrations**

The location of proposed building structures, locations of ground water samples, locations and depths of soil samples, and analytical detection limits affected the selection of the data that was used to represent a given receptor and pathway. One borehole (BH-1) was located in the vicinity of the western proposed structure and no soil or ground water analytical data was obtained. The majority of soil samples collected from the most contaminated areas (the eastern half of the site) were taken from depths that were typically below the water table (9 to 20 feet). The use of this type of data for the vapor intrusion from soil pathway is less than desirable. At two locations shallower samples were taken (BH-8@ 2 feet and BH-15@ 3 feet). However, BH-8 was from near the interface of surficial fill and native material and the extremely high analytical detection limits in BH-15 resulted in few confirmed concentrations. For these reasons only soil data collected from depths shallower than 10 feet were used for both the vapor intrusion pathway for non-residential on-site workers and construction workers.

The assumptions used and data selected for estimating representative concentrations for the various receptors and routes of exposure described above include:

#### On-Site Construction Worker

Soil data from four boreholes (BH-9@ 10 feet, BH-11@ 9 feet, BH-14@ 10 feet, and BH-15 @ 3 feet) in the immediate vicinity of the eastern proposed building were used for calculations. Because of the data quality issues described above, the uncertainty as to the representativeness of the soil data, and to provide a reasonably conservative estimate of the potential risk to these receptors the maximum soil concentrations measured from these samples was used.

#### On-Site Non-Residential Worker

The same representative concentrations used to assess risk to construction workers onsite were also used for on-site non-residential workers exposed via the soil vapor intrusion pathway. The use of the maximum concentrations is justified because the number of data useful data points in the area of interest is low, and the true contaminant concentrations in the unsaturated zone in the area of interest as well as the actual locations and dimensions of the pole treatment pits themselves are unknown. For the ground water vapor intrusion pathway for on-site workers the representative concentrations were assumed to be the average ground water concentrations calculated using measured values for COC from BH-9, BH-11, BH-12, and BH-15, in the immediate vicinity of the eastern proposed building. It was determined that the use of the average value for groundwater data was appropriate because of the higher reliability and representativeness of this data compared to the soil data used for the soil vapor intrusion pathway.

#### Off-Site Residential and Non-Residential Receptor

Because there is sparse off-site ground water data, particularly in some specific downgradient locations (such as directly to the east), with which to estimate representative concentrations and risks to these receptors a different approach was selected.

Representative ground water concentration data from the identified on-site source area that was used for estimating risks to on-site receptors was also used to estimate risks and target levels for residential and non-residential receptors assumed to be off-site. Only the groundwater vapor intrusion pathway was included as opposed to both soil and ground water pathways for on-site receptors. The ground water target levels calculated for the various COC were then used as the off-site compliance point concentrations for back calculation of what could be left behind in the source area on-site in order to be protective of off-site vapor intrusion exposures from ground water.

#### Risk Estimates

The calculated risk to on-site construction workers (Hazard Index (HI) of 0.96) was determined to be acceptable.

The calculated risk to on-site non-residential workers was determined to be unacceptable. The Hazard Index for these receptors was 4.0 with the bulk of the risk associated with soil vapor intrusion risk (3.2). Ground water vapor intrusion risk by itself was acceptable with an HI of 0.8. This implies that risk to off-site non-residential workers is also acceptable.

Using the on-site source area COC representative concentrations the estimated risk to off-site residential receptors (both child and age-adjusted individuals) was unacceptable with HI values of 29.1 and 9.82, respectively. The acceptable off-site COC groundwater concentrations calculated for residential receptors based on these risks are presented in Column 2 in Table 1. Also included in this table are the corresponding ground water and soil target levels at the source on-site (Columns 3 and 4, respectively) that would be protective of off-site receptors and soil target levels on-site (Column 5) that would be protective of on-site receptors (non-residential workers).

# Uncertainty

There are numerous sources of uncertainty which should be considered in evaluation of the risk estimates discussed above. These include data gaps such as the lack of adequate off-site ground water and soil data, the lack of ground water and soil data in the vicinity of the western proposed building, the representativeness of the soil data used to characterize the soil vapor intrusion pathway, the high analytical detection limit issues, and the uncertainty in the direction of ground water flow.

In addition, some of the assumptions used in developing the risk estimates may be considered conservative. For example, the construction worker and the non-residential on-site worker are assumed to spend the bulk of their exposure period in the vicinity of the eastern proposed building and source area.

The default ground water transport model used to move contaminants in from the source areas to receptor locations assumes that no biodegradation takes place to attenuate chemical concentrations. This may be a conservative assumption at this site given the biodegradability of the contaminants and the considerable amount of time that has elapsed to allow microbial populations to acclimate to the chemicals.

Table 1. Calculated Ground Water and Soil Target Levels for On and Off Site Receptors.

Chemical of Concern	GW RATL@POE (mg/l)	GW RATL@Source (mg/l)	Soil to GW RATL@Source (mg/kg)	Soil VI On-Site RATL@Source (mg/kg)
2-Methylnaphthalene	1.2	1.62	128	55.4
Anthracene	517	696	231,000	132,000
Benzo(a) anthracene	1.95	2.62	64,300	87,500
Benzo(a)pyrene	0.533	0.717	12,200	17,300
Benzo(b)fluoranthene	0.823	1.11	10,800	12,300
Benzo(k)fluoranthene	129	174	3,160,000	2,580,000
Chrysene	11.7	15.7	68,700	65,500
Dibenzo(a,h)anthracene	24.7	33.2	1,120,000	1,730,000
Fluoranthene	255	343	299,000	187,000
Fluorene	67.8	91.3	12,000	7000
Indeno(1,2,3-cd)pyrene	4.41	5.94	365,000	477,000
Naphthalene	0.248	0.334	8.26	3.5
Pentachlorophenol	1050	1410	12,800	N/A
Pyrene	277	373	428,000	270,000
1,2,4- Trimethylbenzene	N/A	N/A	N/A	0.572
Ethylbenzene	N/A	N/A	N/A	45.5
tert-Butylbenzene	N/A	N/A	N/A	2.51

N/A: Not Applicable. No Inhalation Toxicity Available

Values in bold red indicate chemicals for which on-site source area representative concentrations exceed targets.

#### **Conclusions and Discussion**

The results of the risk evaluation indicate that, for the conditions assumed in the analysis, risks to on-site workers and off-site residential receptors are exceeded and warrant additional investigation and/or risk management.

Given the uncertainty issues discussed above regarding data gaps additional investigation might be considered in order to collect site data to those gaps and to further refine the risk estimates presented here. This data would include additional off-site and on-site ground water data which would help to confirm the directions of ground water flow, provide some indication as to whether significant attenuation of contaminants is occurring, and allow a more direct estimate of risks to off-site receptors. Installation of soil vapor points on-site and the collection of soil vapor data from critical locations could be used to more directly estimate the potential risks from the on-site soil vapor intrusion pathway.

Examination of Table 1 indicates that the primary goal of any remedial efforts on-site should be directed primarily toward reduction of naphthalene concentrations, both in soil and in ground water. On-site risks could also be reduced or eliminated by moving the location of the proposed eastern building further to the west away from the areas identified with high soil COC concentrations.

The assumption that the shallow ground water at the site has a low probability of use for drinking water requires that any on-site or off-site areas where groundwater COC concentrations exceed the ground water ingestion targets (the Maximum Contaminant Level or equivalent) would require a deed restriction to prevent exposure via this pathway. On-site environmental covenants would also be needed to prevent exposure via critical pathways.

# **July 10, 2007 RISK EVALUATION ADDENDUM**

In March and May 2007 URS, Inc., at the direction of IDEQ, returned to the site and performed supplementary assessment work. The results of this additional work are described in detail in the draft report entitled *Supplemental Environmental Assessment Report, Alpine Lumber, Sandpoint, Idaho* dated June 8, 2007. The work included installation and sampling of three additional monitoring wells, two offsite and one onsite, and installation and sampling of six soil vapor monitoring points, all onsite. During the installation of the ground water monitoring wells soil samples were also taken for analysis.

The ground water monitoring wells (including three existing monitoring wells) were sampled on March 13, 2007 and the soil vapor points sampled on May 9, 2007.

#### Soil Results

VOCs (predominantly naphthalene) and Polynuclear Aromatic Hydrocarbons (PAH) were detected in soil samples taken during the installation of two wells, onsite at MW-6 and offsite at MW-5. Samples with detections were primarily from the greater depth interval (14-16 feet bgs).

#### **Ground Water Results**

Results similar to those observed in soil were seen in ground water samples. Samples from monitoring wells MW-5 and MW-6 contained numerous detections of VOC and PAH constituents, with concentrations of many chemicals exceeding their respective IDTL. Comparatively, onsite well MW-6 generally had the highest concentrations for all constituents detected. Monitoring well MW-2 had far fewer detections and only for PAH constituents.

Elevations of the newly installed monitoring wells were surveyed and tied into the existing monitoring well network. Ground water elevations were measured in March, April and May 2007 and the direction of ground water flow estimated. Ground water flow in March and April was determined to be in a generally east-northeast direction. The east-northeast direction coincides with the direction measured in late November 2006. This direction shifted slightly to east-southeast in May 2007. In late October 2006, after the completion of the earlier assessment activities, ground water direction was estimated to be south-southeast.

The significant chemical concentrations detected in offsite well MW-5 along with the exceedance of screening levels for numerous constituents poses issues, initially brought up in the earlier risk memorandum, that will require resolution. While it is reasonable to assume that the shallow ground water in this area has a low probability for use as drinking water the standard DEQ policy for release sites where contamination in ground water remains over unrestricted use levels or where the risk evaluation receptor assumption is for nonresidential receptors is to require environmental covenants to prevent the construction of wells in the contaminated aquifer. Covenants would be

required anywhere onsite or offsite where concentrations exceed ground water ingestion criteria. This would apply primarily to the property where MW-5 is located since ground water from MW-4, located at the property to the east of the site, had no significant detections.

An associated issue that arises regards the source of the contamination detected in soils and ground water in the vicinity of MW-5. This sample location is distant from the known locations of pole treating activity on the Alpine Lumber property and, based on the ground water information gathered to date, is not located downgradient from the former pole treating facility. However, the pattern of constituents detected in ground water and soil at this offsite location and the depths at which constituents were detected in soil are very similar to those seen onsite at several boreholes. If it could be established that the contamination at MW-5 is not connected with activities onsite at Alpine Lumber the requirement for a covenant might be eliminated.

## Soil Vapor Results

Numerous volatile organic compounds (VOC) were detected in the soil vapor samples obtained from all the monitoring points installed, including point VP-1 located in the southwestern portion of the site. Concentrations at VP-1 were generally equivalent to those detected in the more heavily contaminated portion of the site. This area was previously assumed to not be impacted by historical site activities.

#### Risk Evaluation

The only pathway for which the risk was quantified was for vapor intrusion to indoor air via soil vapor. Risk was quantified for both residential and non-residential receptors. As a conservative means of evaluating the potential risk via the soil vapor intrusion pathway to indoor air, the maximum concentrations seen at any of the vapor points for all chemicals with detections were selected for use as representative concentrations in the REM software. The depth to the soil vapor sampling point was adjusted in the software to 3.5 feet. All other input parameters were left at their default values or the values used in the original analysis.

#### Results

Selected output from the REM software calculations, specifically tables of representative concentrations in soil vapor and the risk summary, are presented below. The risks and hazards calculated for residential and non-residential exposures to onsite receptors from the soil vapor intrusion pathway to indoor air based on the assumed concentrations in soil vapor were acceptable, 6.0 E-8 and 0.03 (residential risk and hazard) and 9.0 E-10 and 0.0006 (non-residential risk and hazard). This result is based on only one vapor sampling event at a time when ground water levels and soil moisture were high. Typically, multiple vapor sampling events are desired to account for variation in soil moisture conditions and climatic variability that affects vapor transport. However, the calculated risks are two to four orders of magnitude lower than acceptable risk levels and calculated hazard indices are from over one to over three orders of magnitude lower than acceptable hazard levels.

# **Summary and Conclusions**

Additional assessment activities were undertaken at the Alpine Lumber site to fill data gaps identified after the initial assessment and risk evaluation activities were completed. Data gaps identified included a more definitive evaluation of the vapor intrusion pathway to indoor air from soil onsite, the extent of offsite contamination in ground water, and the direction of ground water flow.

Evaluation of the data collected during the supplementary assessment indicates that several of these data gaps were filled. These include:

- Onsite risk from vapor intrusion to indoor air is acceptable for both residential and nonresidential receptors based on one round of soil vapor sampling during a period of relatively high ground water conditions. Several rounds of vapor sampling are typically obtained in order to account for variability in conditions contributing to vapor transport.
- The dominant direction of ground water flow appears to be to the east-northeast although a significant degree of variability has been observed over the last seven months of observations. The timing and source of this variation is not well understood at this time.
- Offsite ground water impacts are not indicated to the east, based on results from well MW-4. Offsite impacts may be occurring on properties to the south, based on results of soil and ground water sampling at well MW-5.

Conclusions based on evaluation of the data gathered to date include:

- The shallow ground water system that is impacted onsite and offsite in the vicinity of the Alpine Lumber site can likely be considered to have a low probability of use for drinking water purposes. This determination should be confirmed with a detailed evaluation. Remediation of the shallow ground water system may not be technically feasible but this should be evaluated and demonstrated. If remediation of the ground water is not implemented environmental covenants will be necessary both onsite and offsite to ensure that the shallow ground water is not accessed for drinking water purposes.
- Based on the soil and limited soil vapor sampling conducted the chemicals detected in the subsurface do not appear to pose a risk from the perspective of other routes of exposure such as vapor intrusion. The contamination also does not appear to be present at depths in the soil that would be contacted during typical construction activities (three to five feet below ground surface) or by typical nonresidential receptors. An exhaustive evaluation of surficial soil contamination conditions was not conducted as part of these investigations.

## RE-2 REPRESENTATIVE CONCENTRATIONS FOR NON-RESIDENTIAL RECEPTORS

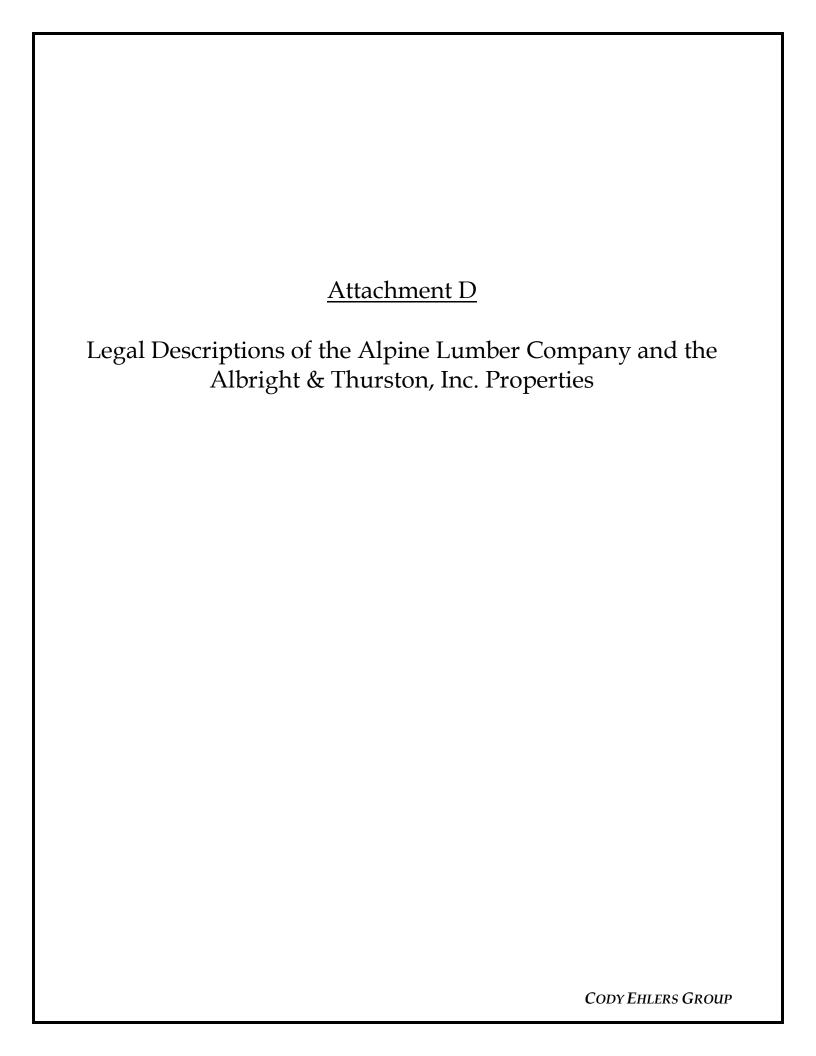
	SURFICIAL SOIL	SUB-SURFACE SOIL	GROUNDWATER	SOIL-VAPOR	
CHEMICALS OF CONCERN	Inhalation of Vapors and Particulates, Dermal Contact, and Accidental Ingestion	Indoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapo Emissions	
	NOT REQUIRED-PATHWAY NOT COMPLETE	NOT REQUIRED-USING SOIL VAPOR	NOT REQUIRED-USING SOIL VAPOR	Representative Concentration [ug/m3]	
1,2,4-Trimethylbenzene (pseudocumene)		4.17E-01		5.20E+01	
1,3,5-Trimethylbenzene				5.80E+01	
2-Butanone (Methyl Ethyl Ketone)	2.00E+00	2.00E+00	2.00E+00	1.50E+01	
2-Methylnaphthalene		5.47E+01	6.07E+00	3.10E+01	
4-Methyl-2-pentanone				2,50E+01	
Acetone				1.00E+04	
Benzene	3.00E+00	3.00E+00	3,00£+00	8.10E+01	
Carbon disulfide			- William	2.50E+02	
Di-n-butyl phthalate				2,40E+01	
Ethylbenzene		5.40E-02		8.30E+01	
Methylene Chloride	2.00E+00			4.10E÷03	
Naphthalene		1.71E+02	4.92E+01	5.50E+01	
Toluene	6.00E+00	6.00E+00	6.00E+00	2.60E+02	
Total Xylenes	1.00E+00	2.00E+00	4.00E+00	3,20E+02	

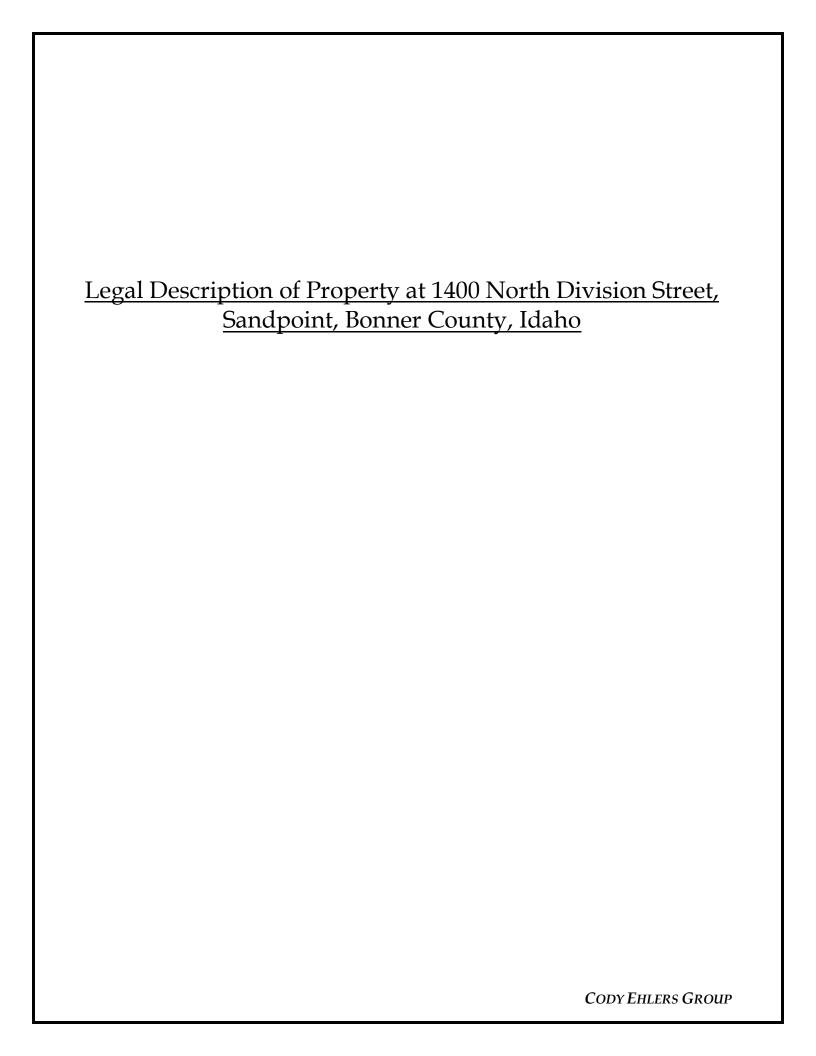
#### RE-2 SUMMARY OF CUMULATIVE RISK AND HAZARD INDEX

	RECEPTOR									
Markey space to an		RESIDE	NTIAL		NON-RESIDENTIAL		CONSTRUCTION WORKER			
Routes of Exposure	CHILD		AGE-ADJUSTED							
	Risk	Hazard Index	Risk	Hazard Index	Risk	Hazard Index	Risk	Hazard Index		
Surface Soil: Inhalation of Vapors and Particulates, Dermal Contact, and Accidental Ingestion	NA	NA	NA	NA	NA	NA	NA	NA		
Subsurface Soil: Indoor Inhalation of Vapor Emissions	NA	NA	NA	NA	NA	NA	Not Applicable	Not Applicable		
Groundwater: Indoor Inhalation of Vapor Emissions	NA	NA	NA	NA	NA	NA	Not Applicable	Not Applicab		
Seil-Vaper: Indoor Inhalation of Vapor Emissions from Soil and/or Groundwater	3.57E-08	2.78E-02	6.03E-08	9.40E-03	9.01E-10	6.28E-04	Not Applicable	Not Applicab		
Site Risk	3.57E-08		6.03E-08		9.01E-10		NA			
Site Hazard Index		2.78E-02		9.40E-03		6.28E-04		NA		
RATL-1/RATL-2 Required?	NO	NO	NO	NO	NO	NO	NA	NA		

#### Notes:

NA: Not applicable because the chemical is not a COC for the pathway (no representative concentration entered) or its properties (toxicity and/or physical-chemical) are not available.





#### Schedule B

## **Real Property**

#### 1. Legal Description of Sandpoint Property:

#### Parcel 1:

A tract of land in a portion of the Southeast Quarter of Section 16, Township 57 North, Range 2 West of the Boise Meridian, Bonner County, Idaho, more particularly described as follows:

BEGINNING at a point on the Southerly right of way line of the existing County Road, known as the Bald Mountain Road, 25.00 feet South and 514.25 feet South 89°38'15" West, along the centerline of said County Road from the East quarter corner of said Section 16, and which point is the true point of beginning; thence along said Southerly right of way line, South 89°38'15" West, a distance of 230.25 feet; thence leaving said Southerly right of way line, South a distance of 167.54 feet to the Northerly right of way line of the Burlington Northern transfer track; thence along said Northerly right of way line, South 79°21'33" East, a distance of 234.27 feet; thence leaving said Northerly right of way line, North a distance of 212.26 feet to the true point of beginning.

EXCEPT a tract of land located in a portion of the Southeast Quarter of Section 16, Township 57 North, Range 2 West of the Boise Meridian, Bonner County, Idaho, more particularly described as follows:

Beginning at the Northeast corner of said Southeast Quarter of Section 16; thence South 89°38'15" West, along the North line of said Southeast Quarter, a distance of 514.25 feet; thence South, a distance of 25.00 feet to a point on the South right of way of Bald Mountain Road, said point being the true point of beginning; thence South 89°38'15" West, along said right of way, a distance of 155.25 feet; thence South, a distance of 182.11 feet to a point on the Northerly right of way of the Burling Northern Transfer Track; thence South 79°21'33" East, along said right of way, a distance of 157.96 feet; thence leaving said right of way, North, a distance of 212.26 feet to the true point of beginning.

#### Parcel 2:

The North 160 feet of the East 220 feet of the following-described tract:

That part of the Northeast Quarter of the Southeast Quarter of Section 16, Township 57 North, Range 2 West, Boise Meridian, Bonner County, Idaho, described as follows:

Beginning at a point 25 feet West and 25 feet South of the quarter corner between Sections 15 and 16 of said township and range, West 1170 feet to the North line of the right of way of the Great Northern Railway spur; thence Southeasterly along the North line of said right of way to a point 306.2 feet South of the point of beginning; thence North to the point of beginning.

#### Parcel 3:

A tract of land located in a portion of the Southeast Quarter of Section 16, Township 57 North, Range 2 West of the Boise Meridian, Bonner County, Idaho, more particularly described as follows:

Beginning at the Northeast corner of said Southeast Quarter of Section 16; thence South 89°38'15" West, along the North line of said Southeast Quarter, a distance of 514.25 feet; thence South, a distance of 25.00 feet to a point on the South right of way of Bald Mountain Road, said point being the true point of beginning; thence South 89°38'15" West, along said right of way, a distance of 155.25 feet; thence South, a distance of 182.11 feet to a point on the Northerly right of way of the Burling Northern Transfer Track; thence South 79°21'33" East, along said right of way, a distance of 157.96 feet; thence leaving said right of way, North, a distance of 212.26 feet to the true point of beginning.

### 2. Legal Description of Sandpoint Parking Lot:

Lot 9, Baldy Park, as per plat recorded in Book 3 of Plats, page 167, Records of Bonner County, Idaho.

### 3. Legal Description of Post Falls Property:

#### Parcel 1:

The North Half of Tract 24, Block 31, POST FALLS IRRIGATED TRACTS, according to the plat recorded in the office of the County Recorder in Book C of Plats at Pages 78 and 79, records of Kootenai County, Idaho.

EXCEPT COMMENCING at the Northwest corner of the Southwest Quarter of the Northwest Quarter of said Section 31; thence, South 89°20'23" East along the North line of the Southwest Quarter of the Northwest Quarter a distance of 659.53 feet; thence South 0°05'30" West a distance of 20.00 feet to a point on the South right of way of Twentieth Avenue, said point being the POINT OF BEGINNING; thence, continuing South 0°05'30" West a distance of 318.78 feet; thence North 89°24'50" West a distance of 148.60 feet; thence North 0°05'30" East a distance of 318.97 feet to a point on the South right of way of said Twentieth Avenue; thence South 89°20'23" East along said right of way a distance of 148.60 feet to the POINT OF BEGINNING.

#### Parcel 2:

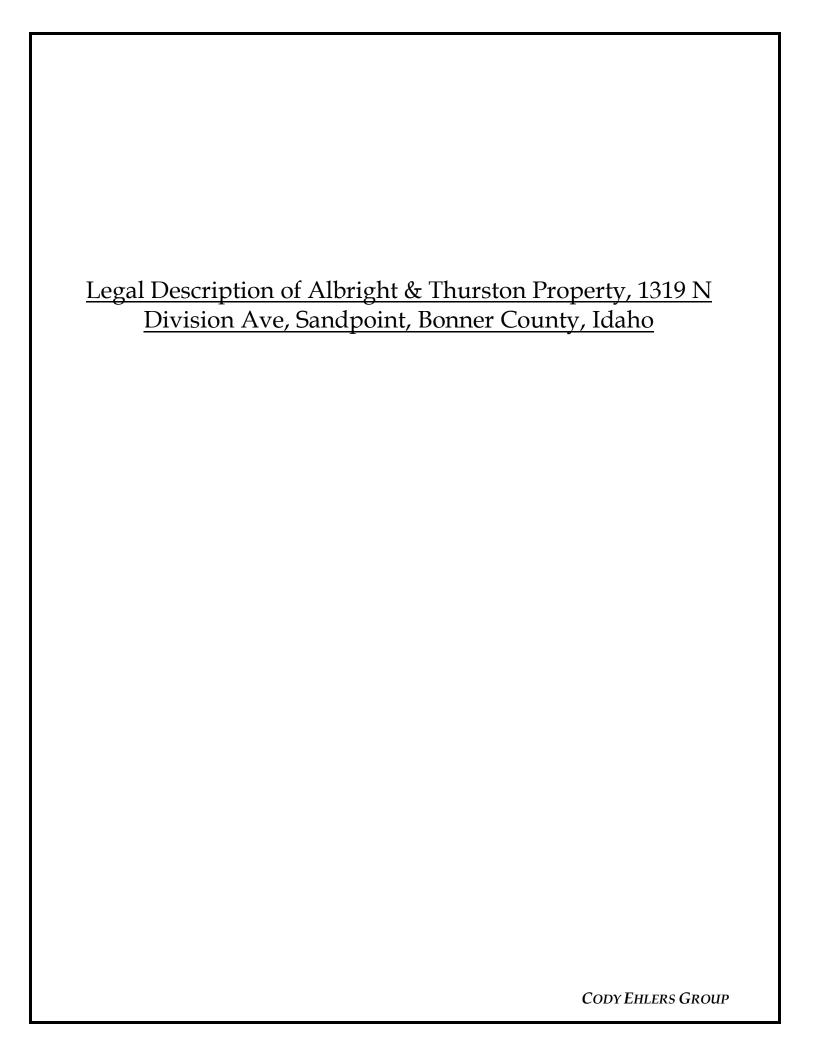
A parcel of land located in Tract 24, Block 31, POST FALLS IRRIGATED TRACTS in Section 31, Township 51 North, Range 4 West, Boise Meridian, Kootenai County, Idaho, more particularly described as follows:

COMMENCING at the Northwest corner of the Southwest Quarter of the Northwest Quarter of said Section 31; thence South 89°20'23" East along the North line of the Southwest Quarter of the Northwest Quarter a distance of 34.34 feet to a point on the East right of way of State Highway No. 41; thence South 0°32'00" East along said right of way a distance of 339.65 feet to a point, said point being the POINT OF BEGINNIGN; thence continuing South 0°32'00" East along said right of way a distance of 100.00 feet; thence leaving said right of way South 89°24'50" East a distance of 472.88 feet; thence North 0°32'00" West a distance of 100.00 feet; thence North 89°24'50" West a distance of 472.88 feet to the POINT OF BEGINNING.

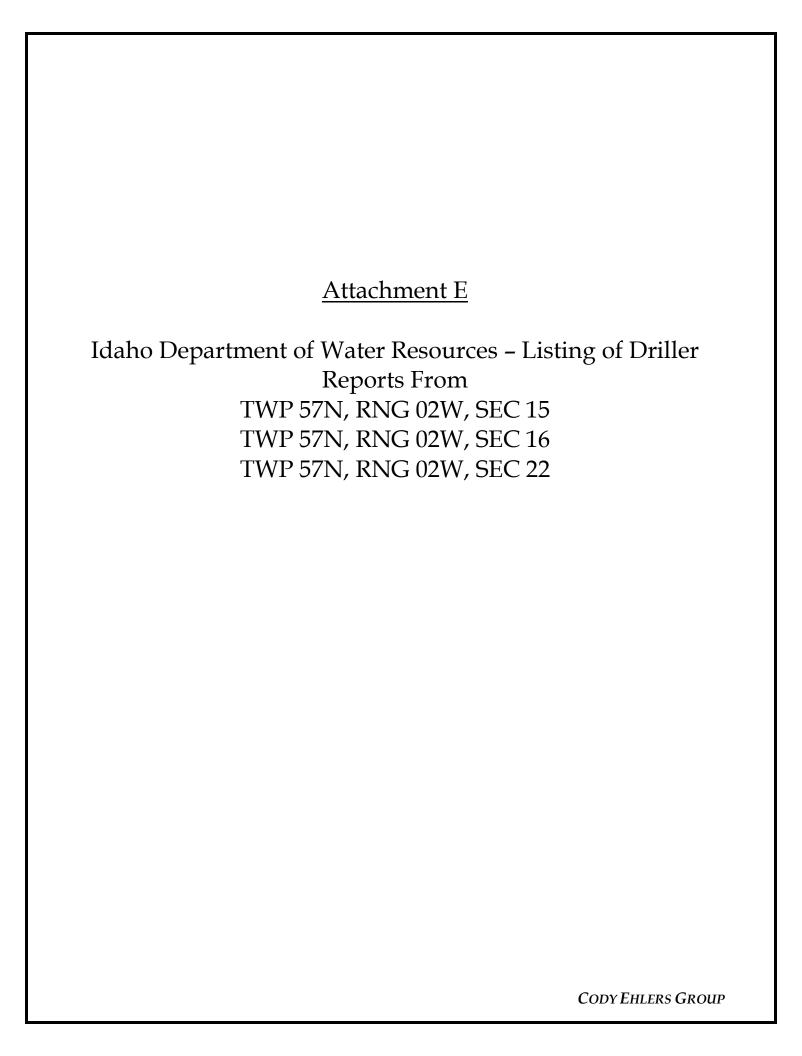
### Schedule A

### **Facilities**

- 1. Sandpoint Facility with an address of 1400 North Division Street, Sandpoint, Idaho, and 1625 Baldy Mountain Road, Sandpoint, Idaho [and a parking lot...]
- 2. Post Falls Facility with an address of 4074 E. Horsehaven Avenue, Post Falls, Idaho.



.2/03/07	PMO100 - PARCEI	MASTER INQUIRY	16:26:4
ARCEL: RP S	361600201A0 A	F10=SW	
A & T INVE	STMENTS LLC	A & T CONSTRUCTION & TENA	PLAT NTS
PO BOX 1563	1	PONDEROSA PROFESSIONAL CN	TR
SANDPOINT 1320 for parcel	ID 83864  HUCKLEBERRY 838  Comments	F3=Exit F5=Refresh F12=	Cancel
CAT RY 21 2007 42 2007		HO MRKT HO EXMP CB MRKT	OTHER
TOTALS	820 395290	XT PARCEL NUMBER RP	A
12	EMIER NE		



## **Idaho Department of Water Resources**

### **Listing of Driller Reports**

Contact	Use	TWP	RNG	SEC	Tract	Gov. Lot	WellAddress	Sub Bi i	Gallon Per Minut	Water	Total Depth	Casing Depth	CSG. DIA.	Construction Date	Permit Number	Tag Number
	Monitoring	57N	02W	15	SESWSE		MW-4			) 14	27	17	4	5/26/1989	757799	
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STATE OF IDAHO Related Documents	Monitoring	5/N	02W	15	SWSE	L	MW-2	<u> </u>	Ļ	) :	19	13	4	5/26/1989	757800	
	Monitoring	57N	02W	15	SWSE	1	MW-5	1		15	23	16	4	5/26/1989	757801	
Related Documents				····		4								<u> </u>		
	Monitoring	57N	02W	15	SWSE	]				15	23	16	4	5/26/1989	757802	
Related Documents COWDREY, DONNA D, COWDREY, MARK	Domestic- Single	57N	02W	15	swsw	(C)	PINECREST LOOP			3 50	302	59	6	4/23/1990	757972	
L	Residence	<u></u>	<u> </u>		<u> </u>		ROAD			<u> </u>	<u> </u>	<u> </u>	<u> </u>			
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BROWN & CALDWELL	Monitoring	57N	02W	15	SESW		HWY 95 & LARCH ST		'		0				758302	
BROWN & CALDWELL	Monitoring	57N	02W	15	SWSE		HWY 95 & LARCH ST			) (	0			<u></u>	758457	
L D MC FARLAND	Monitoring	57N	02W	15	NWSW		1300 N ELLA		'	12	40			10/20/1999	760965	D0010841
Related Documents	<b>-</b>			<u> </u>		<u> </u>										
	Monitoring	57N	02W	15	NWSW		1300 N ELLA			12	40			10/21/1999	760966	D0010842
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW		ELLA		<u> </u>	12	40			10/21/1999	760967	D0010843
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW		1300 N ELLA		1 (	12	40			10/22/1999	760968	D0010844
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW		1300 N ELLA			Above Ground Leve	40			10/22/1999	760969	D0010845
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW		1300 N ELLA		(	14	40			10/23/1999	760970	D0010846
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW		1300 N ELLA			18	24			10/24/1999	760972	D0010848
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW		1300 N			) 14	20			10/25/1999	760974	D0010850
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW		1300 N ELLA			14	32			10/25/1999	760975	D0010851
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW		1300 N ELLA			) 14	30			10/25/1999	760976	D0010852
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	Monitoring	57NI	02W	15	NWSW		1300 N			5	40			10/26/1999	760979	D0010855
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	14	30	10/26/1999	760982	D0010858
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA	•	o	16	40	10/26/1999	760983	D0010859
L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	11	24	10/26/1999	760984	D0010860
L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N			11	16	10/26/1999	760985	D0010861
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	14	30	10/26/1999	760986	D0010862
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	12	40	10/26/1999	760987	D0010863
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N		0	13	20	10/27/1999	760988	D0010864
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	Monitoring	57N	02W	15	NWSW	1300 N		o	11	20	10/27/1999	760991	D0010867
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	Monitoring	57N	02W	15	NWSW	1300 N		o	12	30	10/27/1999	760992	D0010868
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	Monitoring	57N	02W	15	NWSW	1300 N		0	14	40	10/27/1999	760993	D0010820
Related Documents	Withintoning	5/11	02 **	13	rwsw	ELLA	<del> </del>	<u> </u>			10/2//1999	700773	D0010820
	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	9	20	10/27/1999	760994	D0010821
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	14	30	10/27/1999	760995	D0010822
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	14	40	10/27/1999	760996	D0010823
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	8	20	11/2/1999	760997	D0010824
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	13	30	11/2/1999	760998	D0010825
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		o	13	40	11/2/1999	760999	D0010826
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	13	40	11/2/1999	761000	D0010827
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	13	24	11/3/1999	761001	D0010828
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	13	25	11/3/1999	761003	D0010830
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	8	40	11/3/1999	761004	D0010831
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	9	20	11/3/1999	761005	D0010832
L D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA		0	11	30	11/3/1999	761006	D0010833
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L D MC FARLAND	Monitoring	57N	02W	15	NWSW		1300 N ELLA		0	24	30			11/5/1999	761018	D0010929
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SANDPOINT, STATE OF IDAHO	Monitoring, Monitoring	57N	02W	15	SESE		AVE DQ 102			10.5	26	20	2	2/4/2002	772915	D0022097
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CITY OF SANDPOINT,	Monitoring,	57N	02W	15	SESE		830 N 5TH			10.5	26	20		2/5/2002	772016	D0022098
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L D MC FARLAND	Monitoring, Monitoring	1	02W	15	NWSW		1300 N ELLA		0	12	40		1	10/20/1999	780440	
L D MC FARLAND	Monitoring, Monitoring	57N	02W	15	NWSW		1300 N ELLA		0	12	40		1	10/21/1999	780445	
L D MC FARLAND	Monitoring, Monitoring		02W	15	NWSW		1300 N ELLA		0	12	40	Ī	1	10/21/1999	780446	
L D MC FARLAND	Monitoring, Monitoring	57N	02W	15	NWSW		1300 N ELLA		0	12	40		1	10/22/1999	780447	
L D MC FARLAND	Monitoring,	57N	02W	15	NWSW		1300 N		0	Above Ground	40	Ì	1	10/22/1999	780448	
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L D MC FARLAND	Monitoring		02W	15	NWSW		ELLA		0	14	40	ļ	1	11/2/1999	780449	
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L D MC FARLAND	Monitoring, Monitoring	57N	02W	15	NWSW		1300 N ELLA		0	13	24		1	11/3/1999	780452	
L D MC FARLAND	Monitoring, Monitoring	CO.	02W	15	NWSW		1300 N ELLA		0	13	40		1	11/3/1999	780454	
L D MC FARLAND	Monitoring, Monitoring	57N	02W	15	NWSW		1300 N ELLA		0	14	20		1	10/25/1999	780455	
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D MC FARLAND	Monitoring Monitoring,	57N	02W	15	NWSW	1300 N	0	18	21		1	10/26/1999	780466	
D MC FARLAND	Monitoring,		02W		NWSW	ELLA 1300 N	0		30			10/26/1999	780467	
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D MC FARLAND	Monitoring		-	15	NWSW	ELLA 1300 N	0	11	24			10/26/1999	780469	
D MC FARLAND	Monitoring Monitoring			15	NWSW	ELLA 1300 N	0		30			10/26/1999	780470	
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D MC FARLAND	Monitoring	57N	02W	15	NWSW	ELLA	0	12	40		1	10/26/1999	780472	
D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA	0	13	20		1	10/27/1999	780473	
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D MC FARLAND	Monitoring, Monitoring	57N	02W	15	NWSW	1300 N ELLA	0	15	40		1	10/27/1999	780475	
D MC FARLAND	Monitoring, Monitoring	57N	02W	15	NWSW	1300 N ELLA	0	11	20		1	10/27/1999	780476	
. D MC FARLAND	Monitoring, Monitoring	57N	02W	15	NWSW	1300 N ELLA	0	14	40		1	10/27/1999	780477	
D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA	О	12	30	ĺ	1	10/27/1999	780478	
D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA	0	9	20		1	10/27/1999	780479	
D MC FARLAND	Monitoring,	57N	02W	15	NWSW	1300 N	0	14	30	Ì	1	10/27/1999	780480	
D MC FARLAND	Monitoring, Monitoring,	57N	02W	15	NWSW	ELLA 1300 N	0	14	40		1	10/27/1999	780481	
D MC FARLAND	Monitoring,		02W	15	NWSW	ELLA 1300 N		8	20		1	11/2/1999	780482	
D MC FARLAND	Monitoring		02W		NWSW	ELLA 1300 N	0		30			11/3/1999	780488	
D MC FARLAND	Monitoring		02W		NWSW	ELLA 1300 N			40			11/3/1999	780491	
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D MC FARLAND	Monitoring		02W	15	NWSW	ELLA	0	14	21		1	11/4/1999	780495	
D MC FARLAND	Monitoring	57N	02 <b>W</b>	15	NWSW	1300 N ELLA	0	13	30		1	11/4/1999	780496	
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D MC FARLAND	Monitoring, Monitoring		02W	15	NWSW	1300 N ELLA	0	14	40	Ì	1	11/5/1999	780500	
D MC FARLAND	Monitoring	57N	02W	15	NWSW	1300 N ELLA	0	13	30		1	11/5/1999	780501	
D MC FARLAND	Monitoring		02W	15	NWSW	1300 N ELLA	0	11	40		1	11/5/1999	780502	
D MC FARLAND	Monitoring,		02W	<u> </u>	NWSW	1300 N	0	14	40		1	11/5/1999	780504	
D MC FARLAND	Monitoring,		02W		NWSW	ELLA 1300 N	0	-	30			11/5/1999	780506	
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L D MC FARLAND Related Documents OSLYN MANUFACTURING CO LLC		57N	02W	15	NWSW		ORTH LLA			9999	46	36	2	10/25/2003	808012	D003334
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ST ID DEQ	Monitoring	57N	02W	15	NWSW	NEAR 1400 N DIVISION AVE		1	3	20	5	2 3/12/2007	845557	D0051703
Related Docume	nts													

# **Idaho Department of Water Resources**

## **Listing of Driller Reports**

Contact		Use	TWP	RNG	SEC	Tract	Gov. Lot	WellAddress	Sub	BIL	Gallons Per Minute	Static Water Level	Total Depth	Casing Depth	CSG. DIA.	Construction Date		Tag Number
GRITMA GEORGE	É	Domestic- Single Residence	57N	02W	16	SENW					10	44	175	21	6	3/23/1962	755017	
Related I	ocument	ts																
WORMIN SAM	IGTON,	Domestic- Single Residence	57N	02W	16	NWSE	A	<b>)</b>			99999.99	Above Ground Level	118	111	6	9/18/1965	755044	
Related D	ocument																	
OWENS,		Domestic- Single Residence	57N	02W	16	SWNE	B	)			20	40	80	79	6	2/15/1979	756470	
Related D	ocument	s					•											
FOY, ED		Domestic- Single Residence	57N	02W	16	NENW		7.7			12	Above Ground Level	120	114	6	6/29/1989	757849	
Related I	ocument										,					77244803		
ROGERS P	, JOHN	Domestic- Single Residence	57N	02W	16	NENW		2375 MOUNTAIN VIEW ROAD			15	5	102	102	6	5/20/1993	758673	
Related D	ocument	s																
NEHER, RICHARI HOMEST CONSTR	), AKE	Domestic- Single Residence	57N	02W	16	NENW		GOOBY RD			10	18	120	112	6	1/8/1999	760704	D0005476
Related D	ocument	s										2						
STATE O IDAHO	F	Monitoring	57N	02W	16	SESW		N OF INTERSECTION OF 5& & LARCH ST				15	40	22	2	10/7/2002	787636	D0010348
Related D	ocument	S					•									· · · · · · · · · · · · · · · · · · ·		*
STATE O IDAHO	F	Monitoring	57N	02W	16	SESW		N OF INTERSECTION OF 5& & LARCH ST				15.47	37	17	2	10/7/2002	787637	D0022891
Related D	ocument	S				L										<del></del>	•	
STATE O IDAHO	F	Monitoring	57N	02W	16	SESW		N OF INTERSECTION OF 5& & LARCH ST				17	35	15	2	10/7/2002	787638	D0022892
Related D	ocument	s							<b>'</b>					•				
LANEY, I LANEY, .	MILL,	Domestic- Single Residence	57N	02W	16	NWSW		SHIRAS RD OFF BALDY MTN RD			15	20	405	405	6	10/21/2002	787930	D0022919
Related D	ocument	s																
ST ID DE	Q	Monitoring	57N	02W	16	SESENE		N DIVISION ST & N BALDY MT RD			2	14	20	5	2	10/26/2006	843012	D0046365
Related D	ocument	s																
ST ID DE		Monitoring	57N	02W	16	SESENE		N DIVISION ST & N BALDY MT RD			2	19	22	7	2	10/26/2006	843013	D0046366
Related D	ocument	s					1		ι			<u> </u>		r				
ST ID DE	Q	Monitoring	57N	02W	16	NESE		NEAR 1400 N DIVISION AVE			1	3	20	5	2	3/12/2007	845555	D0051701
Related D	ocument	S					<u></u>											
ST ID DE		Monitoring	57N	02W	16	NESE		NEAR 1400 N DIVISION AVE			1	3	20	5	2	4/17/2007	845556	D0051702
Related D	ocument	S																

# **Idaho Department of Water Resources**

## **Listing of Driller Reports**

Contact	Use	TWP	RNG	SEC	Tract	Gov. Lot	WellAddress	Sub B		Gallons Per Minute	Water	Total Depth	Casing Depth	CSG. DIA.	Construction Date	Permit Number	Tag Number
ENVIROSAFE	Monitoring	57N	02W	22	NESW		819 DOVER HWY			0	0	0				758384	
ENVIROSAFE	Monitoring	57N	02W	22	NESW		819 DOVER HWY			0	0	0				758385	
ENVIROSAFE	Monitoring	57N	02W	22	NWSW		819 DOVER HIGHWAY			0	0	0				758386	
ENVIROSAFE	Monitoring	57N	02W	22	NESW		819 DOVER HWY			0	0	0				758387	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE		UNION PACIFIC PROP;US HWY 90 (5TH AVE) & LARCH AVE;523 LARCH	0	33	0	4	20		9	4/9/1996	759807	
Related Documents	T		<del></del>		T	1	<u> </u>		_					r		· · · · · · · · · · · · · · · · · · ·	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE		UNION PACIFIC PROP;US HWY 90 (5TH AVE) & LARCH AVE;523 LARCH		33	0	4	40		9	4/9/1996	759808	
Related Documents																	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE		UNION PACIFIC PROP;US HWY 90 (5TH AVE) & LARCH AVE;523 LARCH		33	0	4	20		9	4/9/1996	759809	
Related Documents	4,	·															
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE		UNION PACIFIC PROP;US HWY 90 (5TH AVE) & LARCH AVE;523 LARCH		33	0	4	20		9	4/10/1 <b>99</b> 6	759810	
Related Documents						<b>.</b>								<u> </u>			
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE		UNION PACIFIC PROP;US HWY 90 (5TH AVE) & LARCH AVE;523 LARCH		33	0	4	25		9	4/13/19 <del>9</del> 6	759811	
Related Documents								, ,	-								
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02 <b>W</b>	22	NWNE		UNION PACIFIC PROP;US HWY 90 (5TH AVE) & LARCH AVE;523 LARCH		33	0	4	30	,	9	4/13/1996	759812	
Related Documents						1											
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE		UNION PACIFIC PROP;US HWY 90 (5TH AVE) & LARCH AVE;523 LARCH		33	0	5	25	20	2	4/12/1996	759813	
Related Documents		_	T	,		·		,							T	_	<del></del>
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE		UNION PACIFIC PROP;US HWY 90 (5TH AVE) & LARCH AVE;523 LARCH		33	0	5	15	3	2	4/11/1996	759814	

Related Documents																	1
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	P1 90 L. A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	0	4	30	20	2	4/12/1996	759815	
Related Documents				-			Mark Control of the C										
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	PI 90 La A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	0	5	25	17	2	4/12/1996	759816	
Related Documents																	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	PI 90 L. A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	0	5	15	3	2	4/11/1996	759817	
Related Documents																	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	PI 90 L. A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	0	5	15	3	2	4/11/1996	759818	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	PI 90 L. A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	o	5	15	3	2	4/11/1996	759819	
Related Documents																	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02 <b>W</b>	22	NWNE	PI 90 L. A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	0	5	15	3	2	4/11/19 <del>9</del> 6	759820	
Related Documents																	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	PI 90 L. A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	0	5	15	3	2	4/11/1996	759821	
Related Documents																	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	P1 90 L. A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	o	5	15	3	2	4/11/1996	759822	
Related Documents																	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	PI 90 L. A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	0	5	15	4	2	4/9/1996	759823	
Related Documents	·		,		····	<del></del>			٦		<del></del>		······································		1	<del></del>	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	PI 90 L. A	NION PACIFIC ROP;US HWY 0 (5TH AVE) & ARCH VE;523 ARCH	033	3	0	5	15	4	2	4/9/1996	759824	
Related Documents									- P	-					·		

CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO Related Documents	Monitoring	57N	02W	22	NWNE	UNION PACIE PROP;US HW 90 (5TH AVE) LARCH AVE;523 LARCH	Y	033	0	5	15	4	2 4/9/1996	759825	
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	UNION PACIE PROP;US HW 90 (5TH AVE) LARCH AVE;523 LARCH	Y	033	o	5	15	4	2 4/9/1996	759826	
Related Documents				<b>.</b>	<b>***</b>										
CASCADE DRILLING INC, CAMBRIA ENVIRONMENTAL TECHNOLOGY INC, CLARK OIL CO	Monitoring	57N	02W	22	NWNE	UNION PACIF PROP;US HW 90 (5TH AVE) LARCH AVE;523 LARCH	Y	033	0	5	15	4	24/9/1996	759827	
Related Documents			1			GOA DID GIL									ļl
SAFEWAY, CHEVRON OIL CO	Monitoring	57N	02 <b>W</b>	22	NWNE	523 BIRCH - ACROSS STREET IN SAFEWAY PARKING LO	г		0	Above Ground Level	25	20	2 2/12/1997	760177	
Related Documents					P	1 Part									
CLARK OIL CO	Monitoring	57N	02W	22	NWNE	523 LARCH ST ORIGINAL HOLE 003-MV				0	o		2 5/16/2001	768955	D0017238
Related Documents															
CLARK OIL CO	Monitoring	57N	0 <b>2W</b>	22	NWNE	523 LARCH ST ORIGINAL HOLE NO 012 CW-11	-			0	0		2 5/16/2001	768956	D0017239
Related Documents				_							-				
CLARK OIL CO	Monitoring	57N	02W	22	NWNE	523 LARCH ST ORIGINAL HOLE NO 011 CW-12				0	0		2 5/16/2001	768957	D0017240
Related Documents				prenson									- I Market		
CLARK OIL CO	Monitoring, Monitoring, Monitoring, Monitoring	57N	02W	22	NWNE	523 LARCH ST ORIGINAL HOLE NO 009 CW-13				14	0		2 5/15/2001	768959	D0017241
Related Documents											-				
CLARK OIL CO	Monitoring, Monitoring	57N	02W	22	NWNE	523 LARCH ST ORIGINAL HOLE NO 007 CW-14				0	0		2 5/15/2001	768962	D0017242
Related Documents						T									
CLARK OIL CO	Monitoring	57N	02 <b>W</b>	22	NWNE	523 LARCH ST ORIGINAL HOLE NO 008 CW-15	- 1		0	o	0		2 5/16/2001	768964	D0017243
Related Documents						1							· · · · · · · · · · · · · · · · · · ·		
STATE OF IDAHO	Monitoring, Monitoring	57N	02W	22	NENE	RIGHT OF WA 3RD AVE BETWEEN LARCH & FIR DQ 101				10.5	26	20	2 1/31/2002	772900	D0022096
Related Documents		r		r		1 (	-			7		··· <del>·</del>		<del></del>	<del></del>
CITY OF SANDPOINT, STATE OF IDAHO	Monitoring, Monitoring	57N	02W	22	NWNE	705 N 5TH AV DQ 104	Е			10.5	26	20	2 1/24/2002	772917	D0022099
Related Documents				,	Y		<del></del>		-	-					
	Monitoring, Monitoring	57N	02W	22	NWNE	705 N 5TH AV DQ 105	Е			10.5	26	22.5	2 1/22/2002	772918	D0022100
Related Documents							——————————————————————————————————————								
CITY OF SANDPOINT, STATE OF IDAHO	Monitoring, Monitoring	57N	02W	22	NWNE	705 N 5TH AV DQ 106	E			10.5	26	20	4 2/8/2002	772920	D0022101
Related Documents			l	Γ		RIGHT OF WA	Υ								

CITY OF SANDPOINT, STATE OF IDAHO	Monitoring, Monitoring	57N	02W	22	NWNE	SHORT ST BETWEEN LARCH & FIR DQ 107		10.5	26	20	2 2/6/2002	772921	D0022102
Related Documents													
CLARK OIL CO,	Monitoring,	57N	02W	22	NWNE	5231 LARCH ST		10.5	26	20	2 2/7/2002	772922	D0022103
STATE OF IDAHO Related Documents	Monitoring		L		1	DQ 108		1				1	20022.03
CLARK OIL CO, STATE OF IDAHO	Monitoring, Monitoring	57N	02W	22	NWNE	SAFEWAY 705 N 5TH AVE BEHIND THE STORE IN BLVD ON 4TH AVE DQ 109		10.5	26	22.5	2 1/23/2002	772925	D0022104
Related Documents		•				<u> </u>						•	
MAXIM TECHNOLOGIES INC	Monitoring	57N	02W	22	NWNE	5TH AVE & LARCH ST		16	28	23	2 10/1/2002	787369	D0010345
Related Documents													
MAXIM TECHNOLOGIES INC	Monitoring	57N	02W	22	NWNE	5TH AVE & LARCH ST		17	28	23	2 10/1/2002	787370	D0010346
Related Documents						- 1							
MAXIM TECHNOLOGIES INC	Monitoring	57N	02 <b>W</b>	22	NWNE	5TH AVE & LARCH ST		15	30	22	2 10/2/2002	787371	D0010347
Related Documents									· · · · · · · · · · · · · · · · · · ·				
ENVIROSAFE	Domestic	57N	02W	22	<u> </u>		9999	9999	10		4/26/1992	805102	
Related Documents	T	T	т	т		523 W LARCH		Т	·····				r
CLARK OIL CO	Monitoring	57N	02W	22	NWNWNE	ST LAKCH		6	22	19.5	1 4/15/2004	812977	D0033654
Related Documents			T										
CLARK OIL CO	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST PW2		7	21	19	14/16/2004	812978	D0033655
Related Documents			·			4							
CLARK OIL CO	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST PW3		6	22	20	1 4/16/2004	812979	D0033656
Related Documents	T		·	<del>,</del>								<b>~</b>	
CLARK OIL CO	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST		7	15	5	2 9/17/2004	824024	D0033569
Related Documents													
POINT WEST ENTERPRISES, DAIRY DEPOT	Monitoring	57N	02W	22	swsw	1105 MICHIGAN INTERSECTION HWY 2 & MICHIGAN	o	0	0		2 7/21/2005	834641	D0033755
Related Documents				-					****				
DAIRY DEPOT	Monitoring	57N	02W	22	swsw	1105 MICHIGAN INTERSECTION HWY 2 & MICHIGAN	o	0	0		2 7/21/2005	834642	D0033756
Related Documents													
DAIRY DEPOT	Monitoring	57N	02W	22	swsw	1105 MICHIGAN INTERSECTION HWY 2 & MICHIGAN	0	0	0		27/21/2005	834643	D0040477
Related Documents													
DAIRY DEPOT	Monitoring	57N	02W	22	swsw	1105 MICHIGAN INTERSECTION HWY 2 & MICHIGAN	o	0	0		2 7/21/2005	834644	D0040478
Related Documents		· · · · · · · · · · · · · · · · · · ·	-										
CLARK OIL COMPANY	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST	0	6	21	19	1 3/2/2006	838521	D0041321
Related Documents													
CLARK OIL COMPANY	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST	0	6	21	19	1 3/2/2006	838523	D0041322
Related Documents													
CLARK OIL COMPANY	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST		6	20		1 4/3/2006	838524	D0041323
Related Documents	T		T	г—	1	C22 WI ADOU		*1					<u> </u>
CLARK OIL COMPANY	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST		6	20		1 4/3/2006	838525	D0041324
Related Documents					<del></del>	Para 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
CLARK OIL						523 W LARCH ST 50 FT S OF							

											_	
COMPANY	Monitoring	57N	02W	22	NWNWNE	LARCH 5 FT FROM FENCE	0	6	20	1 2/28/2006	839058	D0041428
Related Documents												
CLARK OIL COMPANY	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST	0	6	20	1 2/28/2006	839059	D0041429
Related Documents												
CLARK OIL COMPANY	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST	o	6	20	1 2/28/2006	839060	D0041430
Related Documents		·							·····			
CLARK OIL COMPANY	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST		6	20	1 2/28/2006	839063	D0041431
Related Documents			- <del></del>									
CLARK OIL COMPANY	Monitoring	57N	02W	22	NWNWNE	523 W LARCH ST		6	20	1 2/28/2006	839064	D0041432
Related Documents		******								<u> </u>		
POINT WEST ENTERPRISES, DAIRY DEPOT	Monitoring	57N	02W	22	swsw	1105 MICHIGAN INTERSECTION HWY 2 & MICHIGAN	0	0	O	2 10/11/2006	842762	
Related Documents												
DAIRY DEPOT	Monitoring	57N	02W	22	swsw	1105 MICHIGAN INTERSECTION HWY 2 & MICHIGAN	0	0	o	2 10/11/2006	842763	
Related Documents												
DAIRY DEPOT	Monitoring	57N	02W	22	swsw	1105 MICHIGAN INTERSECTION HWY 2 & MICHIGAN	0	0	O	2 10/11/2006	842765	
Related Documents												
DAIRY DEPOT	Monitoring	57N	02W	22	swsw	1105 MICHIGAN INTERSECTION HWY 2 & MICHIGAN	0	0	o	2 10/11/2006	842770	
Related Documents												
		والم والمساحب									-	

# USE TYPEWRITER OR BALL POINT PEN

#### State of Idaho Department of Water Resources





## WELL DRILLER'S REPORT State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

Abandoned (describe method of abandoning)	Surs Pumpe	fater s No						
Artesian closed-in pressure	Surs Pumpe	fater s No						
Owner's Permit No. 96-29-N-137   Artesian closed-in pressure	W	fater s No						
2. NATURE OF WORK	W	fater s No						
CF New well   Deepened   Replacement   CF Pumo   Bailer   Other	W	fater s No						
Discharge G.P.M.   Draw Down   Ho 20   40 fo 78	W	fater s No						
Abandoned (describe method of abandoning)   20	W	fater s No						
3. PROPOSED USE  Stringation   Test   Other (specify type)   9. LITHOLOGIC LOG     Municipal   Industrial   Stock   Waste Disposed or Injection   Hole   Depth   Depth   Meterial     4. METHOD DRILLED   6 2 30 Besides, Clay present	Yes	s No						
Domestic   Irrigation   Test   Other (specify type)   9. LITHOLOGIC LOG     Municipal   Industrial   Stock   Waste Disposal or Injection   Hole Depth   Meterial     A. METHOD DRILLED   G 2 30 Depth   Depth   Meterial     Company   Depth	Yes	s No						
Domestic   Irrigation   Test   Other (specify type)   9. LITHOLOGIC LOG     Municipal   Industrial   Stock   Waste Disposal or Injection   Hole Depth   Meterial     A. METHOD DRILLED   G 2 30 Depth   Depth   Meterial     Company   Depth	Yes	s No						
Municipal   Industrial   Stock   Waste Disposal or Injection   Hole Dism. From To   Material	Yes	s No						
4. METHOD DRILLED  Stock   Wash Uniposition   Diam. From To   Meterial    Meterial   Diam. From To   Meterial    Meterial   Diam. From To   Diam.   Di	Yes	s No						
4. METHOD DRILLED 6 2 30 Boulder clay gran	e (							
	$\ell$	X						
6 30 60 clear estate	<i>l</i>	Y						
Ox Cable   Rotory   Dug   Other   6 60 70   Color   Color		1						
5. WELL CONSTRUCTION 6 70 80 grant sand little co	y X	<del> </del>						
		1						
Diameter of hole inches Total depth feet Casing schedule:		1						
Thickness Dismeter From To		+						
1250 inches be inches + 1 feet 79 feet		+						
inches inches teet teet   teet		工						
inches inches feet feet inches inches feet feet		┿						
inches feet feet		<del>-</del>						
Was casing drive shoe used? (3: Yes   No		+-						
Was a packer or seel used? ☐ Yes Ø No Perforated?								
Perforated?	<b></b>	4						
Size of perforation inches by inches		+						
Number From 2 feet 2 feet		1						
perforations / feet feet feet / / / / / / / / / / / / / / / / / /		$\perp$						
perforations feet feet feet	<del></del>	┿						
		+						
Well screen installed?   Yes  No  Manufacturer's name	:							
Tune Madel No.		<del></del>						
Diameter Slot size Set from feet to feet Department of two		+						
Diameter Slot size Set from feet to feet Wurthern District Office	's	工						
Grave packed?  Yes Y No Size of gravel	<del>!</del>	+-						
Placed fromfeet tofeet	-i $-$	+						
Surface seel depth 18 Material used in seal  Coment grout		1						
Surface seel depril 2.12 Material seel in seel I Coment group		Ţ						
Seeling procedure used Sturry pit DY Temperary ourface coming		+						
Overbore to seel death								
10								
6. LOCATION OF WELL Work started 1-31-79 finished 21.	<u> </u>							
Sketch map location must agree with written location.								
II. DRILLERS CERTIFICATION								
Subdivision Name Firm Name Babliffs care walderly	Firm Name 305 Piffsices welder Firm Non 35							
W Address R+3 Box 10 G Dotes	215	79						
Lot No		_						
Signed by (Firm Official) The It of the								
County Banner								
(negation) / // // / / / / / / / / / / / / / / /	(Operator)							
50 4 NEX SOC 16, T. 52 NB, R. 2 EN								
USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT								



# REPORT OF WELL DRILLER State of Idaho

## **Department of Reclamation**

State law requires that this report shall be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

Name Sam Wormen gton	Size of drilled hole: Total depth of well: Standing water	
Address Moule	ilevel below ground: Manal Temp.	
Som down to dake	Fahr. Test delivery: gpm or cfs Pump? Bail	į
Owner's Permit No. 96-65-N-5  NATURE OF WORK (check): Replacement well	Size of pump and motor used to make test:	
New well X Despened Abandoned	Length of time_of test: / Hrs. Min.	_
	Drawdown: ft. Artesian pressure: ft.	
METHOD OF CONSTRUCTION: Rotary Cable X	or 500gpm. Shutoff pressure:	
Dug Other	Controlled by: Valve Cap Plug X	· e?
	Tes No MATERIAL WATE FROM TO YES OR	8.
"Diam. from /k plant ft. to // ft.	DEPTH MATERIAL WATE FROM TO YES OR	R
"Diam. from ft. to ft.	irrico recen	
CASING SCHEDULE: Threaded welded  "Diam. from // ft. to // ft.  "Diam. from ft. to ft.  "Diam. from ft. to ft.  "Diam. from ft. to ft.  Thickness of casing: Material:	1 12 Chy yellow 3	<del>( )</del>
Steel X concrete wood other	12 /11 Class Blue 19	رود
Treet M concrete   1000   00001		
(explain)		
PERFORATED? Yes No Type of perforator used:		
Size of perforations: "by " perforations from ft. to ft.	This well is the mit	
perforations from ft. to ft.	To well in	
perforations from ft. to ft.	When I	
Size of perforations: "by "perforations from ft. to ft.  perforations from ft. to ft.  perforations from ft. to ft.  perforations from ft. to ft.  WAS SCREEN INSTALLED? Yes No X	ell in the	
Type Model No.	freeling to	
Diam. Stot size Set iron it. to it.	A greating	
Diam. Slot size Set from ft. to ft.	, ILINGS	
CONSTRUCTION: Well gravel packed? Yes X No. 7/2 size of gravel Gravel	see -	
No. 2 size of gravel Gravel placed from 90 ft. to // ft. Surface seal		
provided? Yes X No To what depth?  ft. Material used in seal:		
Did any strata contain unusable water? Yes No. Type of water:		
No. Type of water: Depth of strata ft. Method of sealing	102879	
strata off:		
Surface casing used? Yes No.		
Cemented in place? Yes No		
Locate well in section		
<b>≉</b> X		
17 1/2		
	Work started: Sept 15 /965 Work finished: Sept 19 1966	
Sec.	Well Driller's Statement: This well was	
	drilled under my supervision and this repo is true to the best of my knowledge.	)rt
-21-21	Name: Menald Toels	
	Address: Kout # / Sage Schal	
	Signed by:	
LOCATION OF WELL: County Banner		
NULL Sec. 17 T. NA R. 2 R/W	186	
Not 16 57 Use other side for	additional remarks 11565	